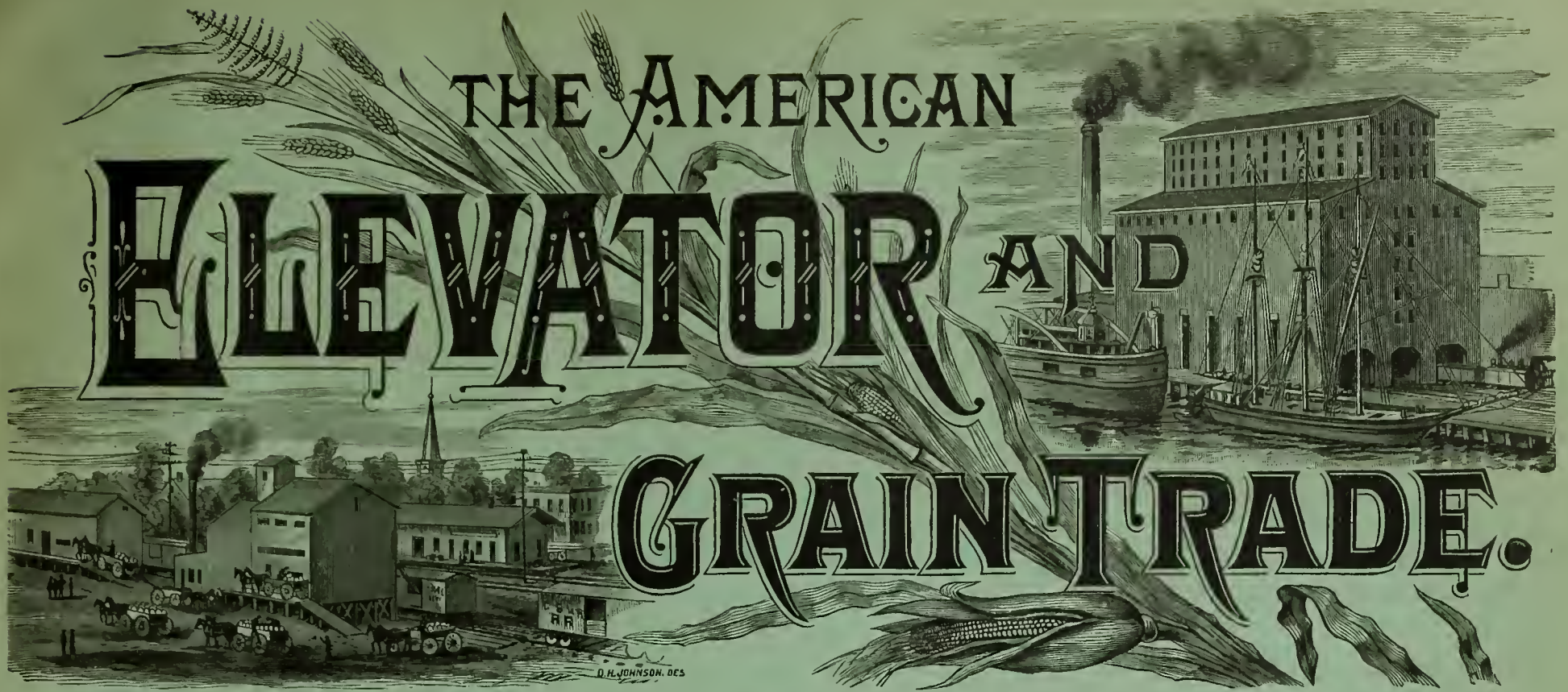


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A MONTHLY JOURNAL DEVOTED TO THE ELEVATOR AND GRAIN INTERESTS.

PUBLISHED BY
MITCHELL BROS. COMPANY,
(INCORPORATED.)

VOL. X.

CHICAGO, ILLINOIS, NOVEMBER 15, 1891.

No. 5.

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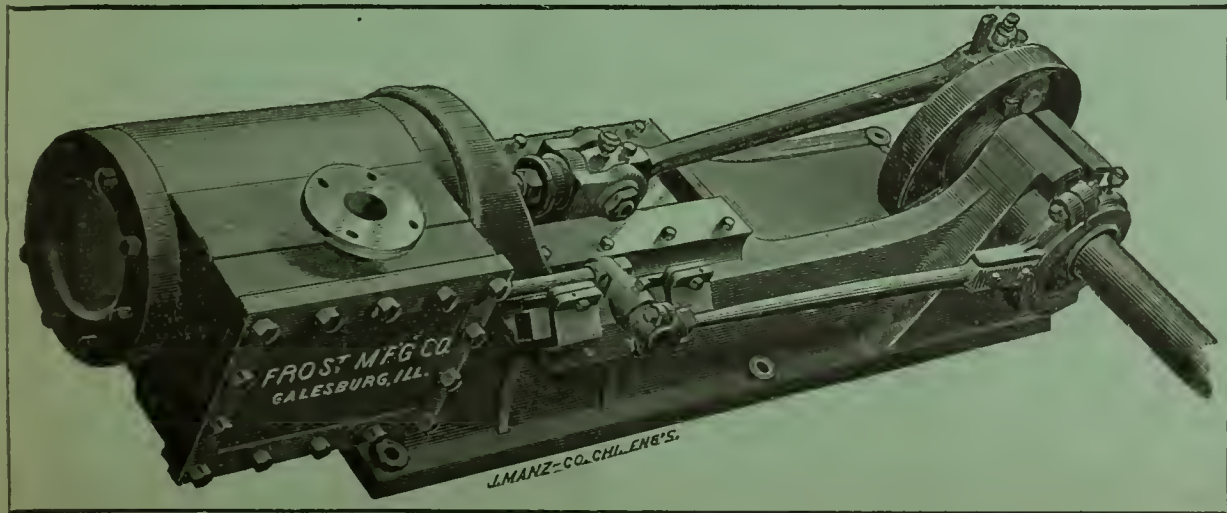
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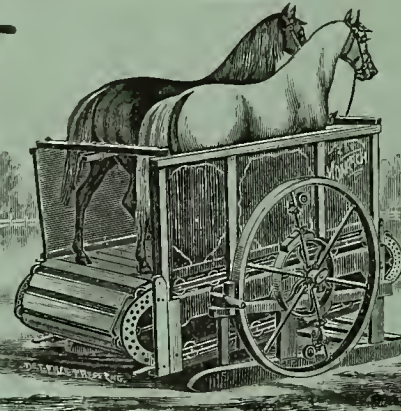
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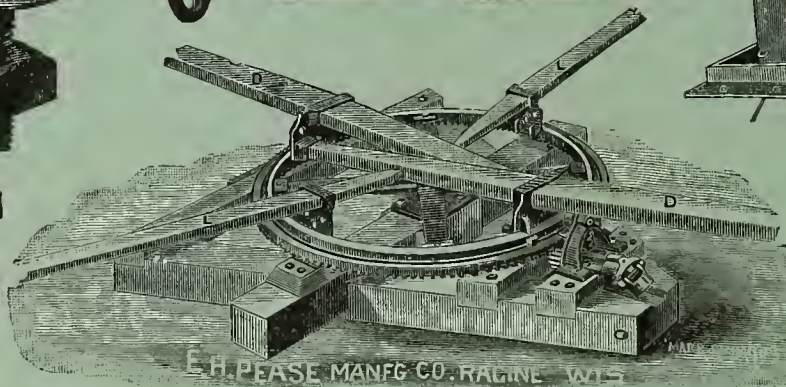
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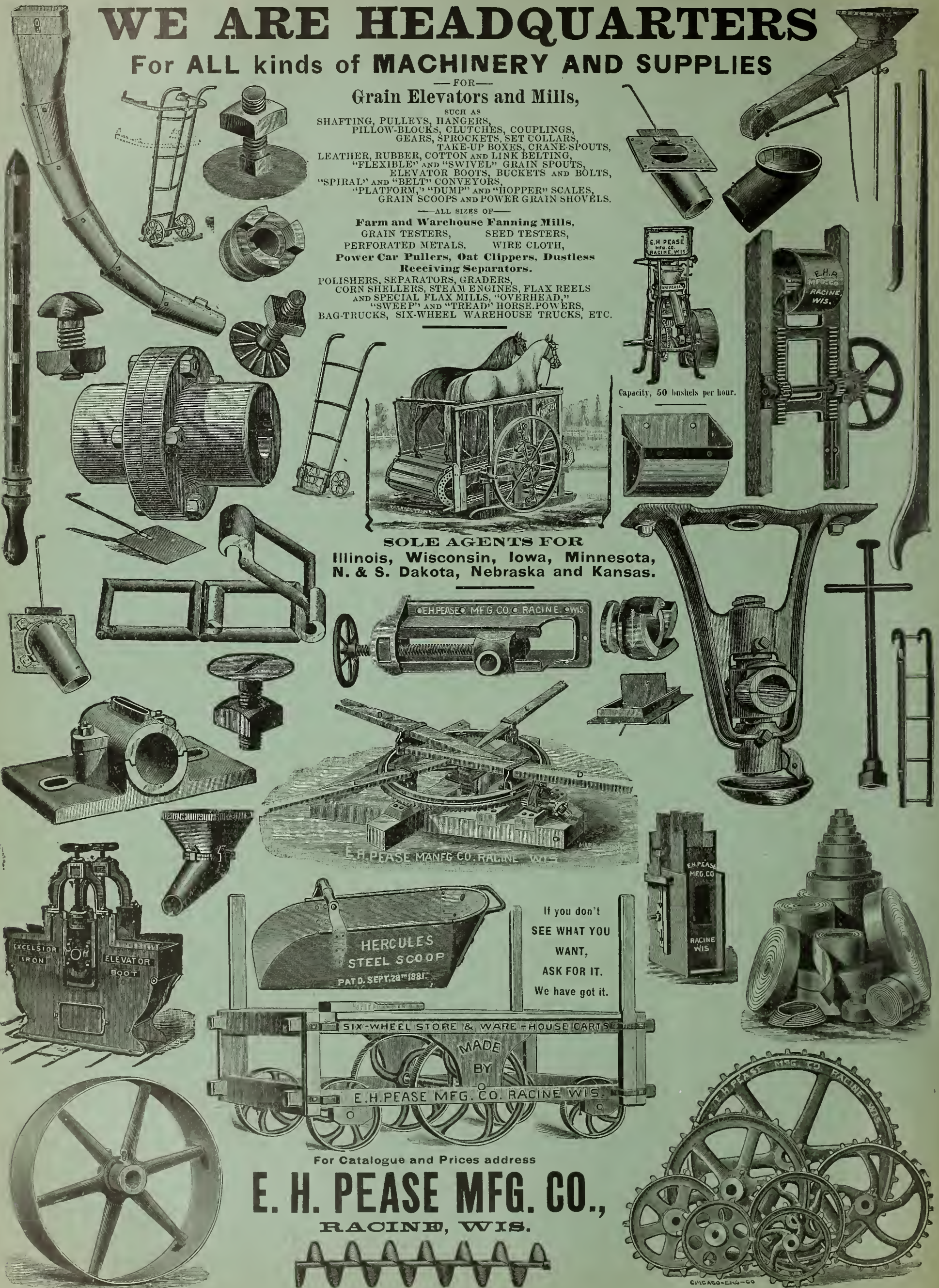


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SEE PAGE 137.



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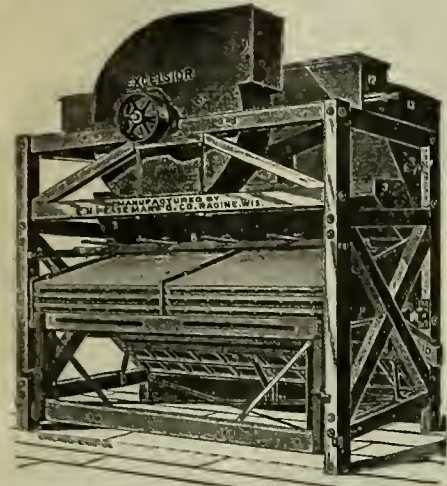
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Cleans, Separates and Grades Perfectly.
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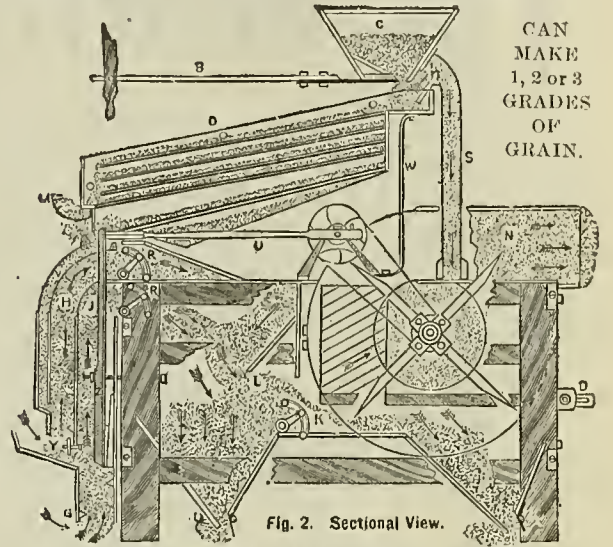
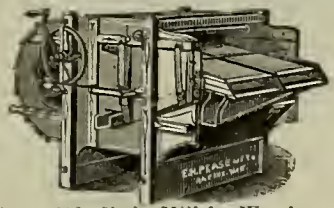


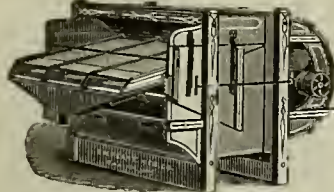
Fig. 2. Sectional View.

EXCELSIOR SEPARATOR AND GRADER.

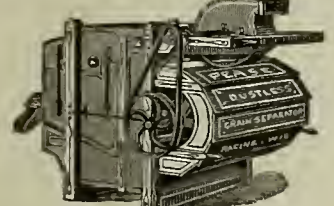
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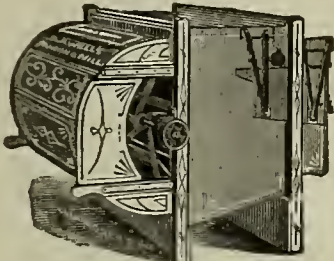
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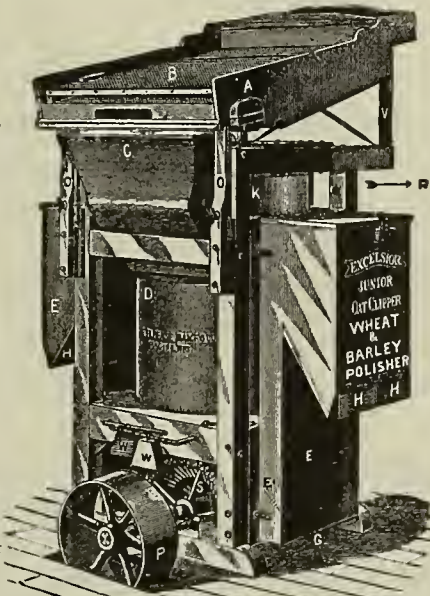


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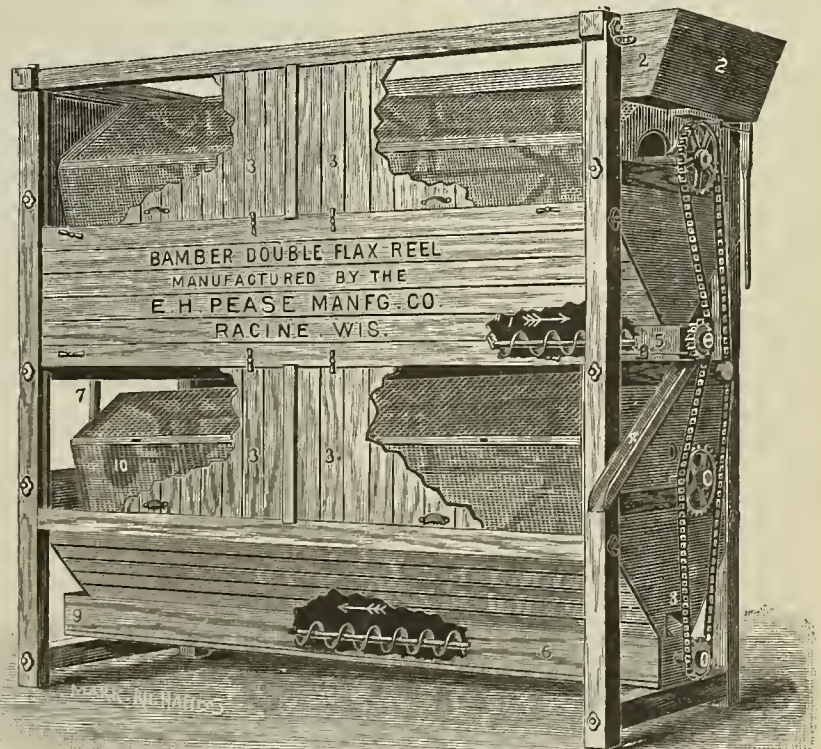
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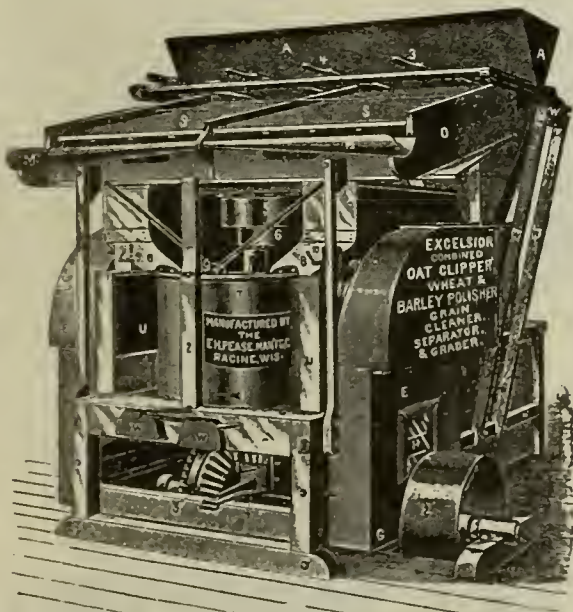
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Gentlemen,-

Your Separators, which during the past summer you put into our million and half million elevators at this point, are giving excellent satisfaction, and our superintendent, who has had long experience in the elevator business, states to us that they are the best Separators he has ever operated.

We have four No.8 Warehouse Separators in the Union Pacific Elevator, and six No.8 Separators in the Santa Fe Elevator.

We simply add to this, as a recommendation, that when we are in need of more, we shall not look further than your Company.

Yours truly,

The Midland Elevator Co.

Chas. J. Rye

Pres.

A complete line of these machines can be seen and full information obtained at our Western Branch, 63 and 65 South Canal Street, Chicago, Ill.

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KILN-DRIED NEW CORN.

It appears that a good deal of new corn is grading No. 2 in Chicago after all. The *Chicago Herald* says: There is a claim that kiln dried new corn is not deliverable on contracts because the germ is killed. One of the largest elevator owners gave this as his opinion. The inspectors do not agree with this view. Inspector Smilie of the grain inspection department in answer to inquiries said: "Yes, I have inspected new kiln-dried corn as contract this season because it was in every respect contract corn. It was dry and had all requirements. It was artificially dried, of course, but could only pass on its actual quality and condition. The system of drying is unlike the old process. There was a time when the corn was occasionally slightly burned, and the process could be detected by the smell. At present it is different. The moisture is taken out of the grain by a process of hot and cold blast being forced through it. The shrinkage caused by the drying out process leaves little profit, however, to the manipulator, and only a small amount is being brought up to grade in this way."

SHORTAGES AT MONTREAL.

The interest taken in the recent shortages of grain at the Montreal Elevating Company has by no means flagged among the principal exporters of grain at this port, but on the contrary it was increased when a grain dealer from Berthier last week made the statement that he suspected that stealings had been going on for some time from the fact that his business had sustained serious injury from shipments of grain going into Berthier by the boat from Montreal and being sold there at considerably under market values. He also expressed the opinion that had a searching investigation been promptly instituted by the Montreal Elevating Company the moment their two men were caught stealing twenty-three bushels of grain and selling it for \$10, other arrests must have followed, and the whole nefarious business been exposed and put a stop to. The only promptness, however, that the management of the Montreal Elevating Company has apparently manifested throughout the whole affair is its suit for \$4,000 damages against the *Trade Bulletin* for daring to comment upon what the grain shippers of this port considered its dilatory conduct and manifested unwillingness to arrest the two men as soon as caught, and for expressing their astonishment in these columns that after finding, in spite of its lawyers opinion to the contrary, there was no alternative but to prosecute, it conducted the

case in such a lenient manner toward the accused that the police magistrate could not well, under the circumstances, pass a heavier sentence than he did, namely, fifteen days' imprisonment. But is it any wonder that our grain shippers, when they read the proceedings in court and the light sentence passed upon the men, felt indignant at the manner in which they believed their interests had been trampled upon and trilled with by the management of a monopoly that has antagonized them for years?—*Trade Bulletin, Montreal.*

LINSEED OIL WORKS AT MANKATO, MINN.

The linseed oil plant illustrated herewith is the property of the Mankato Linseed Oil Works at Mankato,



LINSEED OIL WORKS AT MANKATO, MINN.

Minn. The plant was established in 1872, and the business has grown so that the works now have a capacity of seventy-five barrels of linseed oil and twenty five tons of oil cake per day.

Much of the oil is shipped East in tanks, and is well known in some of the large Eastern markets. The oil consumed in the state is of the Mankato brand. About thirty men are employed in the works, which are kept running about nine months of the year. It provides an excellent market for the flaxseed dealers of the Northwest.

The buildings and warehouses of the company are very substantial structures. The storage capacity of the elevators is about 225,000 bushels. Between 300,000 and 400,000 bushels of flaxseed are crushed annually at the works. Mr. J. A. Willard is manager, and W. D. Willard is assistant manager.

TRANSFER AND STORAGE RATES AT NEW YORK HARBOR.

Since the dissolution of the grain warehouse trust last May, says the *New York Commercial Bulletin*, it has been a go-as-you please scramble between the grain warehouses and floating elevator companies of this port to see which would get the most of the little business doing at the lowest rate. This fight ended in the consolidation of the two leading floating elevator companies last summer, under the title of the International Grain Elevator Co., which absorbed Mr. Armour's company and the New York, leaving only one other, McCord's, which does more private business for McCord & Co. than of public transferring of grain in the harbor.

Since the new crops began to come forward more freely, there has been an endeavor to restore and maintain regular rates, but it has been found difficult, as the bulk of the free arrivals have gone directly through this port into export. Until recently the reduced shipments have left a considerably larger surplus to go to store. To secure the benefit of this increased business, it was found necessary to co operate, though impossible to form another trust after the failure of the last one to succeed, in consequence of the short crops and small exports of the last year. But a meeting of the warehousemen was held, at which it was agreed to co-operate for restoration of old rates, to $\frac{5}{8}$ cent per bushel for the first ten days' storage and $\frac{1}{4}$ cent for each ten days thereafter; and to restore the transfer charge to $\frac{3}{8}$ cent also, and $\frac{1}{2}$ cent extra storage on shipments, to be paid by the vessel. The floating elevators, which are only interested in the transferring of grain from canal boats or lighters

to vessels or to store, did not attend that meeting, which decided that the above rates should be put in force as soon as the floaters would agree to maintain the latter rates for transfer. This was accomplished Oct. 4, by the consent of President Armour of the International Company, to charge above rates from that date, to which Mr. McCord agreed to adhere as long as the International Company maintained them. At the meeting of Sept. 30 all the stationary grain stores and elevators in Brooklyn were represented by Messrs. Annan, Lamhier, Bartlett, Pinto, Beard and the U. S. Warehouse Co.

Jose Castro, a wealthy Mexican, attempted to raise the price of corn to \$4 a bushel, and the natives shot him full of holes. This ought to be a warning to wicked Chicago men who think of opening branch operations in Mexico.—*Kansas City Star.*

A WHEAT ELEVATOR PROBLEM.

It is a common opinion among the farmers of the West that they do not receive for their products at the farm the prices to which they are fairly entitled; that, in short, they are robbed by the intermediary agents who buy and transport from producer to consumer. We are familiar with the working out of this opinion in the matter of railway rates. In North Dakota the farmers are trying to put into effect a law aimed principally at the elevator companies. The feeling against the large companies, who now own most of the country elevators and grain warehouses, is of several years' standing. Two years ago that state passed three or four severe laws against elevators. These were found to be mutually contradictory and the meaning so confused that little or no attempt was made toward enforcing them. These objections were sought to be removed by a general law passed at the last session.

This present law declares that all elevators in the state used for storing wheat are public warehouses, and therefore subject in all respects to the state. It provides that elevator accounts shall be open to inspection, and that regular statements of receipts and expenses shall be made; that 2 cents per bushel shall be the maximum charge for storage of wheat for the first twenty days, including insurance, and that all wheat shall be inspected and the grade determined in North Dakota under the supervision of the railroad commissioners.

Against all these stringent provisions the elevator companies protest vigorously, and will resist them by all possible means. These companies object to make public their private affairs. They declare that 2 cents per bushel for three weeks' storage at country elevators will not pay expenses. They therefore decline to receive grain on storage under the restraints of the law, but will buy it. They have taken good legal counsel, and consider their position unassailable. The courts have lately tended to ward the doctrine that agencies in which the public have an interest by reason of public use are subject to regulation, so warehousemen may be legally regulated by the state of North Dakota. But if a company adheres strictly to the plan of only buying wheat, storing its own wheat in its own elevators, it is conducting a private business, and is beyond the special control of the legislature.

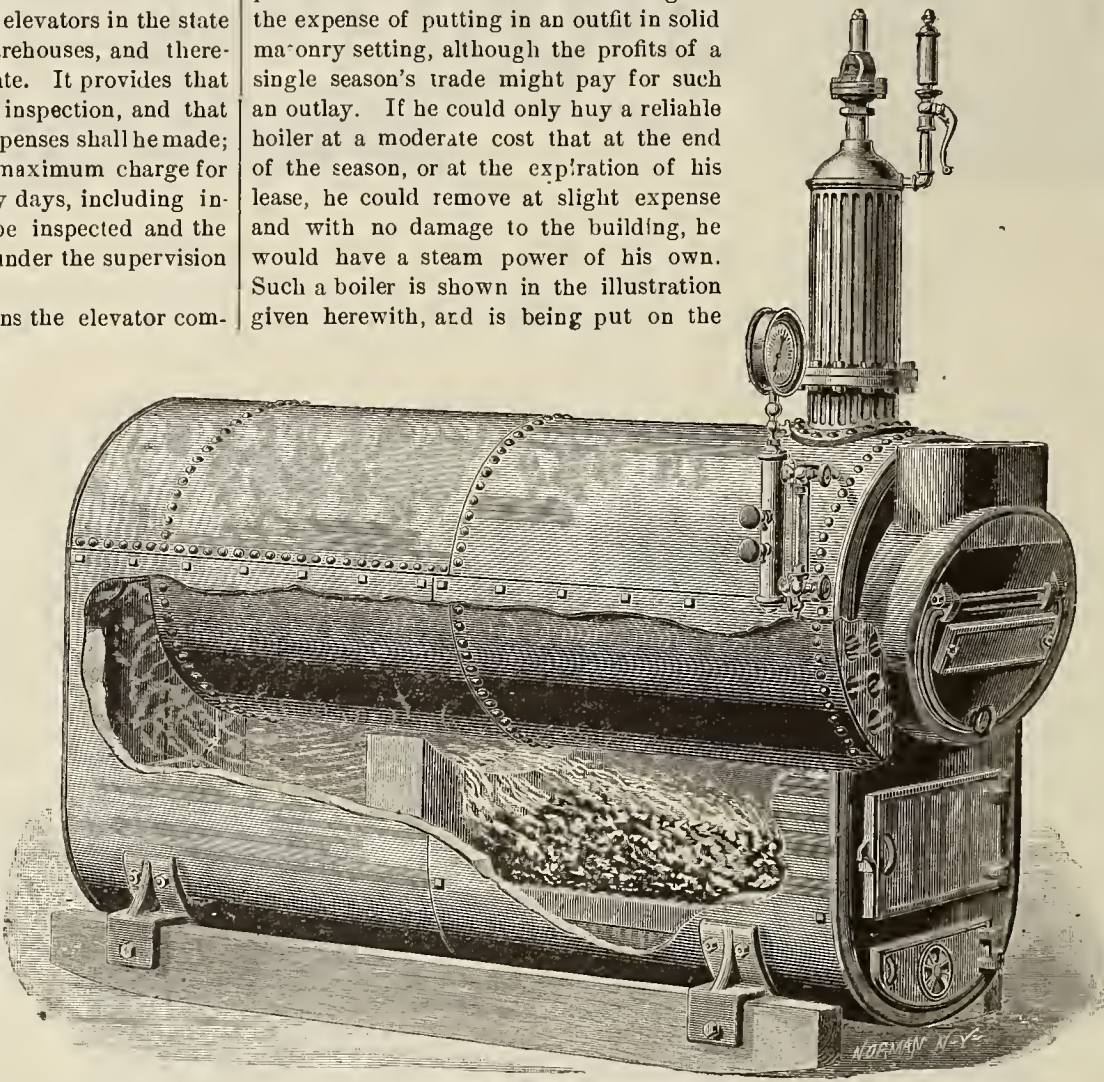
As to the profits of country elevators, it may be and probably is the fact that in some cases injustice has been done to the Dakota wheat producer, but generally speaking, if the elevator companies have earned money, the farmers have been equally benefited. The one clear proof of this is the fact the farmer need not sell to the grain man at his station, but can forward his cars to Minneapolis or Duluth. He is sure to receive strict grading in those large markets, and to get from commission men the highest market price less expenses. The fact that the wheat growers who have done this have in the long run lost money is warrant for the assertion that the elevator agents, generally speaking, pay fair prices. The farmers' complaint, then, seems to be that, in spite of fair treatment to growers, the elevators are profitable; and this profit—though not open to them—the farmers seek to restrict by oppressive legislation. If a capitalist is giving us better prices for our product than we could otherwise obtain, it is folly to complain that he also is making something; it is worse than foolish to obstruct his enterprise.

The profits of country elevators, whenever they become at all large, are not made by simply doing a receiving and forwarding business. Elevator officers watch the course of prices closely, and on buying a large quantity of wheat now they at once try to sell the same quantity in some terminal market for future delivery. The difference between September and December prices for wheat, we will say, may afford them a profitable storage charge for the intervening time. This of course requires experience, command of capital, and storage room, and while profitable in the hands of men who make a business of it, is beyond the average farmer. On the whole, this

process tends to raise the price of wheat at harvest by equalizing its present with its future value. Upon review of the whole situation, it appears that the Alliance legislature of North Dakota has given us a striking instance of a bad law passed in defiance of every known and acknowledged economic principle.—*New York Evening Post*.

THE RACINE SELF-SETTING BOILER.

For a long time there has been a demand among elevator men for a low priced but durable boiler, that could be easily understood and handled by any one of average intelligence, and yet would not necessitate the expense of an expensive setting such as is required for the ordinary horizontal stationary boiler. Frequently grain men rent elevators whose owners will not equip with reliable steam power. The lessee does not want to go to the expense of putting in an outfit in solid masonry setting, although the profits of a single season's trade might pay for such an outlay. If he could only buy a reliable boiler at a moderate cost that at the end of the season, or at the expiration of his lease, he could remove at slight expense and with no damage to the building, he would have a steam power of his own. Such a boiler is shown in the illustration given herewith, and is being put on the



THE RACINE SELF-SETTING BOILER.

market by the Racine Hardware Manufacturing Company of Racine, Wis.

This boiler has a heavy sheet iron furnace lined with heavy fire bricks, while the back end is of heavy cast iron, with heavy cast liners, leaving a dead air space between, so there is no possibility of fire from the boiler itself any more than if it was in an ordinary brick setting. In fact there is not as much, as the boiler can be placed on a floor and fired with perfect safety, the ash pit being contained in the boiler setting itself. The boiler is made of best quality of homogeneous steel plate, thoroughly tested, and fitted with safety valve, feed, check and blow-off valve, steam and water gears, and is shipped from the works ready for use. No masonry of any kind is required. It will burn any kind of fuel. The firm has long made fuel oil burners, and can attach these when required, and so make the fuel supply automatic.

The company already enjoy a very flattering trade with their vertical automatic engines, and these, combined with the above boiler, will make an exceedingly neat and compact outfit, occupying but little room, and being so simple that any one can attend to them. They make engines in from one to ninety horse power. The self-setting boiler is furnished in from four to twenty horse power sizes. Larger boilers are furnished of the regular horizontal type. Elevator men in search of reliable power would do well to correspond with this company before placing their orders.

At the present rate of scientific progress it won't be long before farmers will use electric shocks in their corn fields.—*Binghamton Republican*.

GRAIN DEALERS ORGANIZE.

For many years the grain dealers and millers throughout the Cumberland Valley have been in the habit of taking their customers' grain on storage. The farmers threshed and delivered the grain to the mills or warehouses, left the same with the dealer or miller, took his receipt therefor, and then sold the grain when they were ready. It was a practice which caused dealers and millers a great deal of trouble, subjected them to risk, and entailed considerable loss upon them by shrinkage and in other ways. So to avoid these evils the men in the business in the Cumberland Valley lately effected an organization and elected a miller as their president.

Quarterly meetings are to be held for the consideration of topics which may be of interest or benefit to the association. At present the membership is more local than otherwise in its character, owing to the fact that in nearly every other section this storage custom has been done away with, but it is the intention, we understand, to invite others who may be interested to join in the "anti-storage" movement.

It seems that heretofore those who received grain on storage were legally responsible to their patrons should loss by fire or other casualties occur, notwithstanding the conditions of their receipts given for same. They were subject to considerable loss by the shrinkage of grain held a long while, and by having their warehouses overstocked with stored grain, to the utter impossibility of holding their own purchased grain for a rise in the market. They were forced to sell their purchased grain at little or no margin, to make room for incoming grain to be placed on storage, and stored grain could not be sold without making the warehousemen amenable to the law. When grain was received from the farmers a great deal of extra labor was involved in keeping accounts and invoicing same, in order to keep track of ownership of grain in the warehouse. Then those who held the grain were nearly always forced to buy what was stored on a downward market, and very often were required to buy from 5,000 to 10,000 bushels in a day or two, necessitating the investment of excessive capital

to meet such emergencies. The Grain Dealers' and Millers' Association of the Cumberland Valley was formed to attack these evils in the trade. It numbers among its membership the most influential men in the business indicated, and they will no doubt succeed in accomplishing what they have set out to do.

The officers are: S. C. Wagner, Newville, Pa., president; John A. Miller, Oakville, Pa., secretary; D. H. Miller, Oakville, Pa., treasurer; J. K. Beidler, Oakville, J. W. Sharpe, Newville, U. G. Barnitz, Barnitz, H. K. Miller, Huntsdale, H. J. Brinkerhoff, Walnut Bottom, executive committee.

QUICK LOADING AT PHILADELPHIA.

The Baltimore newspapers point with pride to the fact that the steamship Greystone loaded 98,000 bushels wheat last Saturday in eight hours and thirty five minutes at the new Canton Elevator No. 3, and claim that this is the quickest on the Atlantic coast. This, however, is a mistake, as the Philadelphia elevators lead not only the United States but the whole world in the rapid loading of grain vessels. The best record extant was made a few days ago at the Port Richmond Elevator, when the steamer Thomas Anderson was loaded with 110,053 bushels of grain in eight hours. At the Girard Point elevators the best record made was on Sept. 23, when the City of B last loaded 100,778 bushels, the last 72,000 of which were put aboard in five hours. On Aug. 31 the steamship Dunmore Head loaded 105,500 bushels in eight hours and ten minutes.—*Philadelphia Price Current*.

INCREASED PRODUCTION OF FLAXSEED.

The production of flax in this country has increased rapidly within the last few years. This result has been occasioned almost wholly by the demand for seed and the high prices offered for the same. At present the demand for the fiber is very limited. Whatever manufacturers we have now using flax in making their products few are using American flax, and these to only a small extent. It is only in exceptional cases that flax is grown for its fiber, though it is asserted that the reverse was formerly true. In 1866 50,000 acres were devoted to the cultivation of flax. Between 1866 and 1869 this area was almost doubled. It is said that in 1866 about three-sixteenths of the cotton crop was covered with flax bagging, and in 1869 three-fourths of the entire crop was baled with flax fiber. This would indicate an increased production of flax of from 12,000,000 to 80,000,000 pounds.

A recent report of the Department of Agriculture contains the follows statements as to how this industry disappeared: "The cotton crop of 1870 was 4,347,000 bales. This enormous production taxed the capacity of every bagging mill in the country to its utmost. Even with the opening of the new factories large orders for jute bagging were placed abroad to make good the short supply which seemed inevitable. Then followed the year 1871, a year of the bitterest antagonism between manufacturers and the holders of raw material. It was necessary to effect sales, and prices of both fiber and bagging were forced down. Then followed the tariff legislation of 1872, which removed the duty on jute butts, and mill after mill throughout the West was forced to suspend operations, and they never resumed."

Flax requires very little cultivation, and is a good preparatory crop for wheat and other grain. There has been a steady movement westward, as one state after another has succeeded to the position of the largest producer. "In 1840," says J. R. Dodge, "Virginia stood easily first in flax growing; in 1850 New York and Ohio were at the head; in 1860 and again in 1870 Ohio had the largest acreage, but by 1880 Illinois was first; in 1887 the then territory of Dakota had advanced to first place, and in 1890 the state of South Dakota had the largest acreage, though Minnesota produced the largest crop. Three of the four states which, at different periods, have stood first in this crop—Virginia, New York and Illinois—are not now factors in production, the first having now less than 200 acres and the others less than 5,000 each, while Ohio ranks but eighth."

In 1887 1,284,812 acres were under flax cultivation in this country; in 1888 1,031,751 acres; in 1889 1,060,285 acres, and in 1891 1,927,293 acres. In 1859 our output of flaxseed was estimated at 5,660,867 bushels, in 1869 at 1,730,444 bushels, in 1879 at 7,170,951 bushels, in 1887 at 10,619,742 bushels, in 1888 at 9,479,571 bushels, in 1889 at 9,816,329 bushels, and this year at 15,455,272 bushels.

The following table shows the estimated acreage and yield by states for 1891:

	Acrea.	Bushels.
Ohio.....	18,498	133,912
Indiana.....	3,011	26,349
Illinois.....	4,438	35,013
Wisconsin.....	6,451	68,909
Minnesota.....	425,089	4,082,981
Iowa.....	280,704	2,808,596
Missouri.....	66,577	459,848
Kansas.....	360,000	2,690,000
Nebraska.....	240,000	1,975,000
North Dakota.....	115,000	580,000
South Dakota.....	390,446	2,431,504
All other.....	17,079	163,160
Totals.....	1,927,293	15,455,272

Although we are large producers of flaxseed and our output has greatly increased, still we are importers of the foreign product. These imports are largely re-exported in the form of linseed oil, but from the fact that it produces a different grade of oil from that made from American flaxseed, it is used in different forms and for different purposes, so that it is only in part a competitor with our own product. The major part of these imports comes from India, though the Argentine Republic furnishes con-

siderable seed at present. Out of a total of importations in 1890 valued at \$2,839,057, the British East Indies are credited with direct importations amounting to \$1,864,074 and England with \$938,311, which are undoubtedly reshipments of India seed, while the Argentine Republic supplied \$31,597.

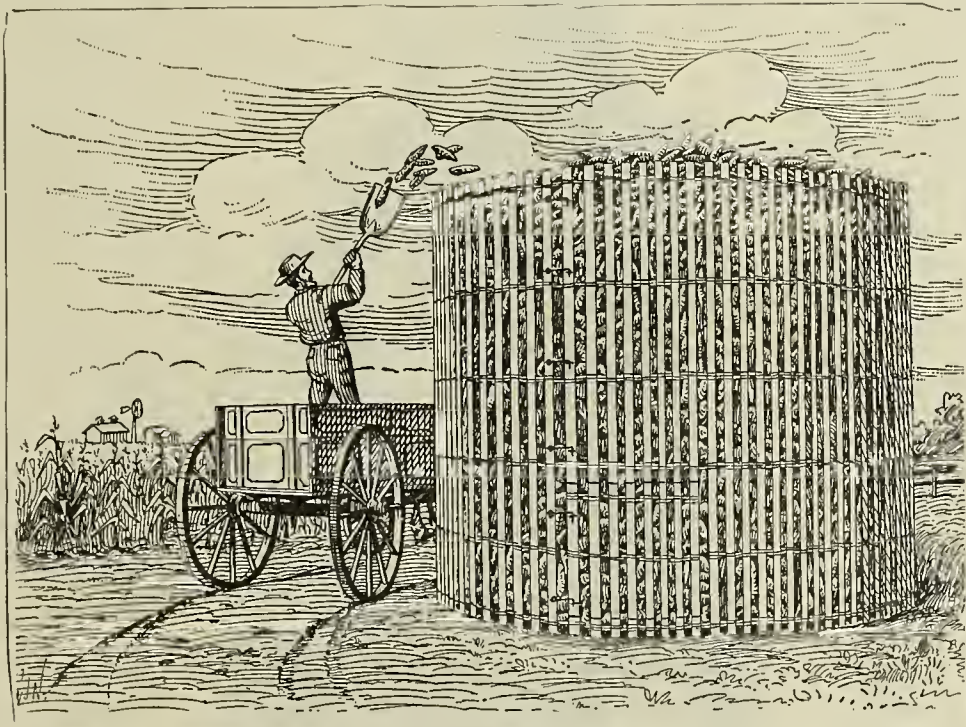
The following have been our imports of flaxseed for the crop years ending June 30 of the following years:

1882.....	\$ 773,044	1887.....	\$ 418,202
1883.....	677,040	1888.....	1,624,964
1884.....	3,079,848	1889.....	3,851,685
1885.....	2,817,715	1890.....	2,839,057
1886.....	1,099,477	1891.....	1,677,552

We have exported some flaxseed in years when our output was too large to meet immediate demands, and these shipments have gone almost wholly to Canada. In 1883 our exports of flaxseed were valued at \$41,155, in 1890 at \$19,792, and in 1891 at \$184,564. Our exports of flaxseed have rather gone out in the form of oil. Most of these shipments have been made to Central and South American countries and to Mexico. In 1890, out of a total of exports amounting to \$55,036, South America took \$23,476, Central America \$3,610, and Mexico \$10,244.

A PORTABLE CORN CRIB.

This year's large corn crop will necessitate the erection of many new corn cribs, for the grain is too valuable to be burned or left on the ground to rot as was the case



A PORTABLE CORN CRIB.

two years ago. It has long been recognized that a cheap portable corn crib would meet with great favor among country grain buyers, and there will be an unusual demand for such a crib this year.

The crib illustrated herewith consists of beveled slats, one inch thick, woven between six sets of galvanized steel wires, and fastened together, making a circle twelve, sixteen, twenty or twenty-four feet in diameter and eight feet high, with a door at the bottom for emptying the crib. The slats are beveled so as to allow the wires to securely hold them in their place. The capacity of these cribs range from 703 bushels to 28.93 bushel.

For ordinary use no floor is required, but a circular floor is made just fitting inside the cribbing, when required.

The crib is shipped all rolled up in a bundle, and requires no tools nor mechanic to erect it. The fastening attachments are all properly secured, and all there is to do is to stand it up on a circle, latch it together and fill it up. Ten or fifteen minutes is all the time it should take to erect a crib. When shelling, if you use more than one crib, as soon as one is empty take it around and set it under the cob-carrier, where it will receive the cobs from the other cribs of corn and keep them in good condition for fuel.

The cribs being movable, can be taken down and removed as often as desired, thus preventing them from becoming a harbor for rats and mice. A good cheap roof may be made by taking a piece of canvas or heavy sheeting, and draw it tightly over the top of the crib and give it a coat of paint.

When a board floor is used the cribbing is drawn tight around the circular floor and fastened. When this floor

is not used dirt is thrown in and covered with hay to protect the corn in bottom of crib. For any further information address W. J. Adam, Water and Wallace streets, Joliet, Ill.

HANDLING WHEAT.

When a belief gains almost general currency, it is a difficult matter to change that belief, no matter how false it may be. The farmers will no doubt still labor under the false impression that the grain shippers will cheat them right and left in cases where they have damaged wheat. We think, however, that business men will readily comprehend the great error which lies in the somewhat general belief that grain men can derive a better profit from damaged than from choice grain. No doubt there are dishonest grain buyers, as well as there are dishonest men in other branches of business, and in some instances, perhaps, advantage may be taken of a farmer who has slightly damaged grain. This, however, has nothing to do with the general business principle, which is the same in handling wheat as in any other commodity, namely, that it is more satisfactory to both the buyer and the seller to handle a good than a poor quality of a commodity.

As stated in a previous issue, damaged wheat will be salable in a short crop year, but in a year of abundance it would be a very slow sale. This year is one of crop failure or partial failure over a large portion of Europe. In the rye countries of Europe there has been a heavy general shortage in the crop, and to make this shortage up other cheap grains will be in demand. So far as this year is concerned, it is therefore safe to count upon a market in the rye-eating countries of Europe for wheat which would hardly be salable in other years and which could not be handled for domestic trade at all.

On account of this being a short crop year, there will be very little wheat, even of the lowest quality, which will not be salable, and consequently shippers will have less risk in handling poor stuff. On the contrary, had this been a year of abundant wheat crops for the world generally, it would be a very risky matter for dealers to undertake to handle the poorer qualities of damaged grain. We know for a fact that the heaviest losses in the Manitoba grain trade in past years were made through handling damaged wheat. Dealers who bought this stuff by the bushel in Manitoba sold it by the ton for feed in the East, at a heavy loss. While it may be comparatively safe to purchase very poor grain this year, in ordinary years it is a risky matter to handle anything badly damaged. This being the case, it is necessary that dealers who undertake to ship this class of grain should work on a considerable wider margin than if they were handling choice qualities.

One exchange which has vigorously attacked the *Commercial* brings up the old chestnut of mixing wheat, and endeavors to show that the farmers are cheated because the grain men improve the value of their purchases through what is known as manipulating wheat. Of course grain men grade up their purchases, sometimes adding a higher quality, to bring a car of wheat up to a certain grade, and sometimes reducing the quality, when it can stand some reduction without altering the grade. It is nonsense, however, to say that this practice is an injustice to the farmer. On the other hand, the farmer is often the gainer thereby. Any advantage grain men gain from mixing enables them to pay higher prices to the farmers. If they can increase the value of their purchases by judicious mixing, they can naturally afford to pay more for the wheat. It is a well known fact that wheat is often taken from farmers on the basis of a higher grade than it will come up to. But even if the farmer did not receive a portion of the profit gained from mixing, the custom could not be considered as an injustice to him.—*Winnipeg Commercial*.

When a Minneapolis man estimates that the Duluth elevators will receive 50,000,000 bushels of wheat this year, it is safe to conclude that they will receive that amount at least.—*Duluth News*.

TESTS OF THE GRAIN TESTER.

A report by the Purdue Agricultural Experiment Station says: Farmers have frequently expressed dissatisfaction with the grain tester used by millers and grain buyers in grading wheat. It seemed desirable, therefore, to ascertain the effect of different methods of filling the measure, and the range in weight per struck bushel of different samples of the same wheat, as indicated by the tester. Accordingly three trials of the tester, of ten weighings each, were made. In the first trial the wheat was run through a funnel and allowed to fall about ten inches into the tester, which was then gently tapped three times with the ends of the fingers before taking the struck measure. In the second trial, after running the wheat through the funnel as before, it was lightly pressed with the hand before applying the straight edge. In the third trial the grain was dipped up with a small scoop and lifted just over the edge of the tester, when the scoop was tipped and the wheat run into the tester with as little force as possible.

The weighings of the first and second trials were carefully made by the writer. In the third trial a miller did the weighing with great care, in the presence of the writer.

Velvet chaff wheat, one of the heaviest varieties grown at this station, was used in all the weighings. Before weighing, the grain was run rapidly through the fanning mill to remove the chaff, long straw, etc. This operation did not take out all the joints of the wheat stems, but all other impurities were removed.

In the first and second trials exactly the same sample was run through the tester each time, and, but for the small portion removed by the straight edge, the samples actually weighed would have been identical. In the third trial the sample weighed was practically the same each time, because, after the first weighing, the contents of the tester were turned back into the sack of wheat from which it had been taken. The wheat was then again dipped into the tester as before, weighed, turned back into the sack, and so on for all the weighings.

The weights taken, maximum and minimum weight, and range of weight, both in pounds and per cent., are all shown in the accompanying table. The per cent. of range is based on the minimum weight in every case:

SHOWING WEIGHT PER STRUCK BUSHEL.

Weight.	Pound per struck bushel.		
	Wheat poured and shaken.	Wheat poured and pressed.	Wheat dipped.
First.....	66.00	67.00	63.75
Second.....	66.00	67.00	63.50
Third.....	66.50	67.00	63.50
Fourth.....	66.50	67.00	63.50
Fifth.....	66.75	67.50	63.50
Sixth.....	67.00	67.50	63.75
Seventh.....	66.50	67.25	63.75
Eighth.....	66.25	67.25	63.75
Ninth.....	66.50	67.50	63.50
Tenth.....	67.00	67.25	63.50
Average.....	66.50	67.23	63.60
Maximum.....	67.00	67.50	63.75
Minimum.....	66.00	67.00	63.50
Range—pounds..	1.00	0.50	0.25
Range—per cent.	1.52	0.75	0.39

In taking the weight it was soon discovered that the faster the wheat was run through the funnel the lighter was the weight, and as it was impossible to run the wheat in a strictly uniform rate, this doubtless accounts for the wider range of weight in the first trial. The inequality in weight, due to difference in rate of filling tester, was partly neutralized by the pressure of the hand, in the second trial, which narrowed the range in weight, but increased the weight per struck bushel. The method employed in the third trial is the one recommended by millers, and although it gives the lightest weight per struck bushel, as would be expected, it is evidently the fairest of the three methods used in these trials of the tester.

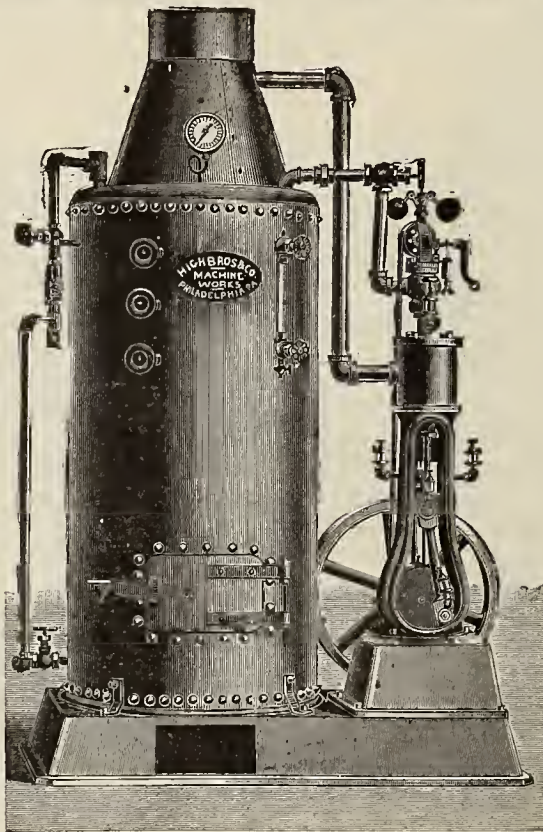
The trial shows (1) that wheat may be readily compressed into a more compact mass, (2) that slight differences in the rate of filling a measure will increase or reduce the quality of wheat that the measure will hold, and (3) that uniformity in filling the tester is just as important as great care in taking the samples to be weighed. The plain lesson of the experiment is that a number of fair samples of the wheat to be graded should be taken, and each weighed several times in a careful and uniform manner, and the average weight of the samples taken to represent the actual weight per struck bushel of grain. If the above named precautions are carefully observed the

grain tester will show, with approximate accuracy, the average weight of the wheat per struck bushel; and it is therefore recommended as an unvarying and impartial standard of grading wheat. If honestly used, its results may be accepted with confidence of being equally fair to seller and buyer.

A VERTICAL BOILER AND ENGINE COMPLETE.

The building of many new country elevators in this country and Canada, and the greater demands made upon the handling capacities of all by reason of a large crop, has caused many elevator men to look about for new power plants. Old plants of small power, occupying much space and consuming much fuel, are being displaced by modern plants which possess many improvements that are essential to the financial success of the elevator man. "To increase the storage capacity of my elevator or increase the handling capacity," is a question that a number of elevator men have decided by putting in a new power plant, and others are continually doing likewise.

The complete vertical boiler and engine illustrated herewith occupies so little space that it is well adapted for use in grain elevators. The engines are of a neat and well-proportioned design. All rods and pins are of steel,



A VERTICAL BOILER AND ENGINE COMPLETE.

including the connecting rod and main shaft. The best means are provided for the proper adjustment of all the wearing parts. All parts are made duplicate, so that repairs will fit. They are neatly finished and nicely painted and are carefully made throughout. Every engine is thoroughly and carefully tested before leaving the works. The engines are complete in themselves, and can be easily and quickly placed in position. They can be set on the same base as the boiler or, separately.

The boilers are made from the best homogeneous steel, and are tested at 150 pounds' pressure. There are no cast-iron tubes or fire boxes in the boilers. The boiler is one or two horse power larger than the engine; this is a great advantage. For a boiler feeder a first-class injector or inspirator is used. The safety valves are all patent pop-valves; this is very important if you value your life and property. These outfits are complete, and no pains are spared to make them first-class and durable. Any further information regarding them can be obtained of J. L. & H. W. High, successors to High Bros. & Co., 123 N. Third street, Philadelphia. This company also makes the Ironsides Motor and dynamos for light and power. The motor is very simple and efficient; its first cost is small, and the expense of running it is trifling.

A representative of the governor of the state of Zacatecas, Mexico, is at Monterey, Mexico, arranging for the importation of corn from the United States for the famine stricken people of his state. In addition to the drouth, the prospect of a crop in that part of the republic was utterly ruined by the recent heavy frosts.

KANSAS INSPECTION.

The troubles in the Missouri state grain department have partially subsided for the time being, and now Kansas has had inspection laws long enough to take a hand in the rows. The Kansas department is being subjected to its first strain on account of incompetent inspectors and dissensions among the stockholders of the exchange. It has developed that the inspections on the other side of the line are worse than the loosely conducted Missouri institution.

The inspection law was passed to protect the farmer of Kansas, and the farmer is just awakening to the fact that he was better off in many respects when all the grain was graded in Missouri. Telephone inspections seem to be fashionable in Kansas just as they are or were in Missouri, and the slipshod way in which the department has been conducted is causing the biggest kind of a row. Two inspectors, Carson and Barnhill, have left the service of the state, and there are said to be other complaints forming from the other side.

Then the grading that is being done is far from satisfactory, and the buyers and sellers are liable to make a complaint at any time. The office is kept in hot water, metaphorically speaking, the greater part of the time, and the Kansas officers are beginning to think that there are far more pleasant positions than those connected with the inspection department.—*Kansas City Star.*

WHEAT CROPS OF THE UNITED STATES.

The following shows Department of Agriculture estimates of wheat production in 1890, with comparisons, arranged by the Cincinnati *Price Current* for winter and spring wheat crops, and estimates for 1891, based on preliminary data of the Department of Agriculture:

	1891.	1890.	1889.	1888.
Ohio.....	41,838,000	29,984,000	36,865,000	28,705,000
Michigan.....	27,484,000	20,271,000	23,709,000	24,028,000
Indiana.....	45,902,000	27,928,000	41,187,000	28,879,000
Illinois.....	39,584,000	18,161,000	38,014,000	33,556,000
Missouri.....	27,515,000	17,638,000	20,639,000	18,496,000
Kansas.....	47,848,000	28,195,000	30,912,000	15,960,000
Kentucky.....	12,222,000	9,152,000	10,811,000	10,436,000
Tennessee.....	11,512,000	7,873,000	9,085,000	10,297,000
New York.....	10,633,000	9,288,000	8,929,000	9,309,000
New Jersey....	2,124,000	1,680,000	1,711,000	1,785,000
Pennsylvania...	20,864,000	16,049,000	16,617,000	18,802,000
Delaware.....	1,250,000	919,000	1,100,000	1,194,000
Maryland.....	7,297,000	6,208,000	6,171,000	7,634,000
Virginia.....	7,218,000	5,614,000	6,804,000	5,172,000
North Carolina.	4,975,000	3,156,000	4,492,000	3,835,000
South Carolina.	992,000	750,000	1,191,000	973,000
Georgia.....	2,323,000	1,411,000	2,383,000	1,910,000
Alabama.....	2,251,000	1,319,000	2,502,000	2,186,000
Mississippi....	483,000	286,000	494,000	532,000
Texas.....	6,435,000	3,575,000	6,189,000	6,066,000
Arkansas.....	2,172,000	1,575,000	1,794,000	2,267,000
West Virginia..	3,142,000	2,326,000	3,144,000	2,899,000
California.....	34,071,000	29,121,000	43,781,000	28,451,000
Oregon.....	17,686,000	12,865,000	13,689,000	14,548,000
Winter.....	377,215,000	255,344,000	332,213,000	277,920,000
Minnesota.....	56,993,000	38,356,000	45,456,000	27,881,000
Wisconsin.....	14,202,000	13,096,000	16,937,000	13,855,000
Iowa.....	26,040,000	19,041,000	21,623,000	24,196,000
Nebraska.....	22,334,000	15,315,000	16,848,000	14,568,000
Dakotas.....	73,000,000	40,411,000	41,652,000	38,036,000
Colorado.....	2,037,000	1,777,000	1,851,000	2,346,000
Washington...	9,031,000	8,071,000	6,856,000	9,006,000
Nevada.....	346,000	250,000	335,000	20,000
Idaho.....	1,811,000	1,370,000	1,449,000	1,252,000
Montana.....	1,856,000	1,488,000	1,539,000	2,001,000
New Mexico...	1,167,000	1,105,000	1,096,000	1,233,000
Utah.....	2,393,000	2,279,000	1,880,000	1,945,000
Arizona.....	400,000	311,000	337,000	370,000
Wyoming.....	.....	.....	.....	.....
Maine.....	627,000	543,000	589,000	589,000
New Hampshire	143,000	140,000	144,000	152,000
Vermont.....	324,000	335,000	325,000	346,000
Massachusetts..	.....	.....	.....	.....
Connecticut...	31,000	30,000	30,000	32,000
Spring.....	212,735,000	143,918,000	158,347,000	137,948,000
Total crop, bu.	589,950,000	399,262,000	490,560,000	415,868,000
Total area, acres	39,219,000	36,087,154	38,123,859	37,336,138
Yield per acre.	15.0	11.1	12.9	11.1
Average price.	.....	83.1	69.8	87.3
Value.....	.....	\$334,773,678	\$342,491,707	\$385,284,030

The sloughs and lakes in the Jim Valley and along the line of railroad between here and Minnewaukan are full of geese and ducks. This is all very nice for the hunters but farmers are complaining that uncounted thousands of these birds make the wheat fields their feeding grounds and many heavy losses from shock are reported. Near Minnewaukan several losses of one-third to one half are reported on large fields.—*Alert, Jamestown, N. D.*

DRIFTING AWAY FROM CENTRAL MARKETS.

One species of highway robbery that might be touched on gently, to more thoroughly convince an anxious public that millers have some ills and griefs, says L. C. Miles in the *Northwestern Miller*, is the pernicious rule that permeates some of the grain centers of guaranteeing weights within 1 per cent. and, when the grain is shipped, deliberately taking advantage of the latitude of the rule and gobbling the five bushels. I could show records of hundreds of cars that are short just this amount, and might add, for the information of the unwary, that I once sent a summary of all weights and shortages to a Chicago attorney, who returned them, after fully investigating the matter, with the notation that I had no case. Just by what course of reasoning the grain-center kings arrive at the conclusion that this shortage will be patiently accepted and submitted to by millers, I can not see, unless it be on the general principle that millers accept and submit to impositions that no other class of business men would think of accepting. As a result of this kind of burglary, millers have been drifting away from general markets as fast as possible, and making their purchases from first hands.

REDUCING FIRE RISK OF ELEVATORS.

Grain elevators, as usually built, consist above the foundation of tall square bins, small in plan, the partitions between which and the outer wall inclosing the whole being made of planks, laid one on another and spiked together until the top is reached, care being taken to lap and alternate properly at intersections and angles. Above the bins and running the length of, but narrower than the building, is the higher portion used for hoisting machinery and distributing the grain to the different bins. This is pierced along the sides and ends for light. The amount of lumber used in the construction of an elevator is enormous, and the cost is considerable. So far as the history of elevator fires is known to us, when a fire once gets well under way in this upper part—which is in large buildings of the class, above the range of successful work by fire departments—the result is a total loss. The upper portion is a timber loft in which much inflammable dust soon accumulates, and over which a fire will run in the smallest interval of time. Soon the smaller timbers are burnt off and fall into the bins below, igniting them from the bottom. In watching the burning of one of these a short time since, which a large and well trained fire department with at least a dozen heavy steamers and one water tower were trying to save, it occurred to us that nothing was so utterly without hope of return as this work of the firemen. A small part of the water thrown fell through the openings of the upper part of the elevator, but most of it, falling on the fire and waterproof siding, ran down the siding and lower roof to the ground. One would hardly venture to say that the inevitable was delayed for five minutes by all the labors of the department.

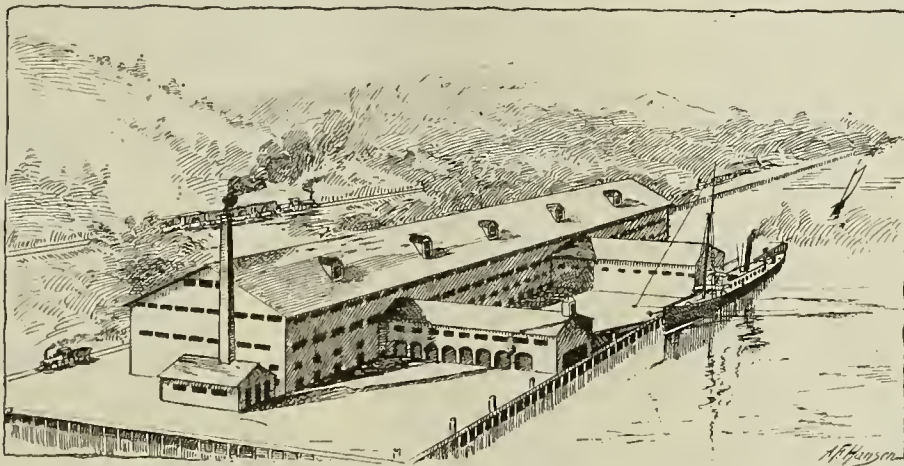
So far as we know there was nothing unusual about the course of this fire or the handling of it, and without questioning whether or not it was proper for the firemen to expend any work on the elevator, it may be profitable to consider whether the conditions are not capable of improvement. When, for instance, the now well-established reforms in the construction of warehouses and factories were not yet practiced, the conditions in some of the old factories were perhaps as hopeless as in the grain elevator. In fact, many buildings of the present time, of classes other than elevators, are just as sure to succumb to a fire once under way as is the elevator. But the builders of good modern warehouses have now so contrived that wooden construction is often as safe for their purposes as any other. Wooden construction is a necessity with the grain elevator. Nothing else at reasonable cost will give the strength and stiffness necessary for the bins. Suppose, then, the work above the bins were to be built so far as possible of large planed stuff, arranged to retain the least possible dust; that automatic sprinklers were provided over the bins and other advantageous points; that the light openings were screened to prevent the entry of sparks from without, and that large perforated pipes

were so placed along the upper ridge as to be available for wetting and cooling so much of the roofs and sides as are not to be easily reached by the fire department from without. We can see no good reason why the construction of grain elevators may not be so modified and such preventive measures introduced as will remove them from the class of fire risks which they now occupy, to a class in which total loss is rare. The same intelligent effort which has reduced insurance rates on some classes of factories to perhaps one-fifth of those paid on the older buildings for the same uses, could surely do much in saving the frightful waste by fire which annually occurs in grain elevators.—*Northwestern Architect, Minneapolis.*

GRAIN WAREHOUSE AT TACOMA, WASH.

In a recent write-up of the state of Washington, *The Graphic* of Chicago, to which we are indebted for the cut given herewith, said: Tacoma, with all its variety of mercantile interests, is built on a pleasant elevation above a considerable area of low-lying land or tide flats along the wharf front, across which the Northern Pacific Railroad runs on its way to where the ocean vessels receive and discharge their cargoes, and on which the road has important repair shops, houses and a large trackage, and which is rapidly being covered with large elevators, warehouses and manufacturing plants of various kinds.

Tacoma is the leading export city of the Northern Pacific coast; its harbor, commodious and deep, is entitled to take rank with the most noted of seaport cities. Already its shipping is important; the sailing vessels en-



GRAIN WAREHOUSE AT TACOMA, WASH.

gaged in coast and foreign traffic that left Tacoma last year were more than 200, and carried a tonnage of more than 180,000. Aside from the largest local consumption of lumber in its history, there were shipped eighty cargoes to San Francisco, Australia, Honolulu, China and Japan, and large quantities to the East by rail, extending as far as the New England states. During the month of June of this year there were shipped to foreign ports six cargoes of wheat, seven of lumber, while 26,000 tons of coal were sent to San Francisco. Twenty-seven wheat ships, having a total tonnage of 43,000, are now on their way to this port under special charter. The wheat warehouse capacity of the city is at present more than 2,500,000, and before the close of another season will have been greatly increased. The wheat receipts at Tacoma during the twelve months ending with May amounted to nearly 4,000,000 bushels.

GRAIN TRADE OF BUFFALO.

During October Buffalo received 19,317,148 bushels of grain and 1,147,705 barrels of flour by lake, which is in excess of the receipts of any preceding October.

The receipts during the past twelve years from the opening of navigation to Nov. 1 were as follows:

	Flour, bbls.	All Grain, bu.	Flour and Grain, bu.
1891.....	5,755,893	99,103,767	126,444,196
1890.....	5,498,432	75,584,238	101,634,758
1889.....	3,830,140	75,908,440	95,131,140
1888.....	4,175,470	64,465,062	85,343,457
1887.....	3,098,998	72,191,136	87,653,123
1886.....	3,555,212	63,591,838	81,368,198
1885.....	2,026,505	43,581,630	53,714,150
1884.....	1,533,521	47,205,496	54,873,106
1883.....	1,346,379	58,196,574	65,423,959
1882.....	1,188,338	43,370,692	49,318,357
1881.....	669,239	50,052,802	53,397,968
1880.....	893,423	94,167,863	98,534,078

GOVERNMENT CROP REPORT.

The statistical returns of the Department of Agriculture for November make the corn crop one of the largest in volume and slightly above the average of 26 bushels per acre. Condition has not been very high at any period of its growth, but it has been quite uniform, with no record of more than 10 per cent. of disabilities from all causes. An extraordinary crop has not been possible. Planting was irregular and late in many places, growth tardy and uneven, and fears of drouth or floods or frosts very generally felt in the later part of the season. Storms in some sections threatened loss, which was minimized; drouth in others checked growth, which was stimulated again by opportune seasons of moisture.

Frosts made early threats of disaster, and then delayed their appearance through the entire month of September, which was warm and forcing, drying out soft corn and shriveling the immature growths. The result is a well ripened crop, somewhat variable in quality, with a moderate proportion of chaffy, unfilled and immature ears. The eastern and western ends of the corn belt—Ohio, Iowa and Nebraska—gave somewhat better yields than Indiana and Illinois, or Missouri and Kansas, the lower levels of the great corn belt suffering more from threatened drouth than the higher elevations.

The highest rate of yield, as estimated, appears in New England, from 35 to 40 bushels per acre; in the South the range is from 11 in Florida to 25 in Maryland, while in the surplus corn states the figures are as follows: Ohio, 33.7; Indiana, 32; Illinois, 31.2; Iowa, 36.7; Missouri, 29.9; Kansas, 26.7; Nebraska, 36.3. Frost in August wrought some injury in the Northwest. In Wisconsin the yield is 26.7; Minnesota, 26.5; North Dakota, 27.2. Both drouth and frost conspired to reduce the yield in South Dakota to 22 bushels.

Much of the crop is yet in the shock, and its condition and rate of yield may be somewhat better known after garnering and marketing. Yet it is evident that the product will not be less than 2,000,000,000 bushels, or 31 bushels per unit of population. The October condition of potatoes has only been equaled once since 1880, and the average yield, according to these preliminary estimates, has not been surpassed in the past ten years. It averages 93.9 bushels per acre. The warm weather in September dried out the soil and checked the incipient potato rot which was threatened after the rains of August, so effectually that it is scarcely reported except in Pennsylvania, some counties in Southern New York and certain districts in New Jersey. Quality is generally reported good except in the regions infested by rot.

Hay has made a nearly average yield, and is of medium quality.

MIXING AT NEW YORK.

The New York *Produce Exchange Reporter* says: "It becomes fatiguing to listen to the occasional remarks about mixing wheat at the seaboard. As far as New York is concerned, we are confident there has been little or no mixing."

We have no occasion for controversy with our old friends or new friends on this subject, and we are only too glad to know that New York does not mix wheat. We thought they did so semi-occasionally. What we do know, and what English dealers ought to know, is that if England and France would import their wheat from Western markets on certificates of inspection for No. 2, they would get a grade of wheat that will average 5 cents per bushel better than the seaboard wheat as it goes to England. We do not attempt to account for it.—*Toledo Market Report.*

That corn can be successfully raised in Oregon, says the Portland *Oregonian* of Sept. 25, is proven by the results on Emil Pfaff's farm near Armstrong in Yamhill county. Mr. Pfaff, who left some splendid specimens of well matured corn at the *Oregonian* office yesterday, says that he raised sixty acres of corn averaging forty-five bushels to the acre. The varieties were Crawford, King Philip and Queen of the North, the last being a dent corn. All this corn ripened well, notwithstanding the backward spring and the wet weather that prevailed early in the season. It proved a very profitable crop.

HANDLING GRAIN IN A CHICAGO ELEVATOR.

The Armour Elevator Company of Chicago, Ill., one of whose elevators forms the subject of the illustrations accompanying the present article, possesses a number of these structures, with an aggregate storage capacity of 9,000,000 bushels of grain. In a working day 1,500 cars can be unloaded, and in an hour about 300,000 bushels can be loaded into cars or vessels. The different elevator are designated by letters extending up to F. They receive grain from the Chicago, Milwaukee & St. Paul and the Chicago, Burlington & Quincy Railroads. An immense area of country is tributary to these lines, the first named representing 6,064 miles, and the last named 6,295 miles of road. Through these lines North and South Dakota, Minnesota, Wisconsin, Illinois, Indiana, Iowa, Nebraska, Kansas and Missouri are drained to the great center of distribution where these elevators are situated.

A shipment occurred in August last, when the elevator illustrated in the cuts received a cargo of wheat by special train from the newly settled Oklahoma. This was the first shipment of wheat to the North from that region.

The same company is said to have a line of grain propellers plying on the lakes, and owns 2,500 cars devoted to transporting grain.

The Armour Elevator receiving grain from the St. Paul road, is the largest elevator in the world under a single roof. Elevator D and its annex, of the Armour Company, surpass it in capacity, but are not a single unbroken structure. The Armour Elevator is rated at a storage capacity of 2,500,000 bushels, can unload 500 cars per day and deliver 100,000 bushels per hour to cars and boats. Cars enough to keep it at work for four days can be accommodated in the great yard annexed to it. The building proper is 550 feet long and 156 feet high. An engine of 1,200 horse power is employed in driving the elevating belts.

The general features of its construction are the following: It comprises a main building surmounted by what is termed the cupola. The main driving engine is situated at one end of the building. Along the top of the cupola a countershaft, the full length of the building, is carried. This is driven by the engine. The main belt is of India rubber and canvas, eight-ply in thickness and sixty inches wide. This runs very nearly vertically from the engine driving pulley to the pulley on the countershaft, 150 feet above it. All along the countershafts are the driving pulleys for working the twenty-eight elevator belts. These belts are also made of India rubber belting, and carry steel buckets riveted at regular intervals along their outside face. As the belt travels up on one side it carries up full buckets. At the top these pass over the driving pulley and are emptied as they turn over, and then they descend empty on the other side of the belt. From the point of delivery of the belt the grain passes by gravity through inclined chutes to the main body of the elevator, and is directed by one or the other of the chutes to any desired point. *Fig. 7* shows a portion of an elevator belt, with the buckets on the ascending side of the belt.

The grain from the elevating belt falls into the mouth of a chute which rotates on a vertical axis, whose prolongation would pass through its receiving end or mouth. Thus, when swung around on its pivot, its receiving mouth remains unchanged in position. The open ends of a number of chutes leading to the garner corresponding to respective bins below are arranged in a circle around the revolving chute or "revolver." Each is numbered in accordance with the bin it leads to. The revolver can be swung so as to connect with any one of these. In this way one elevator is made to feed a number of bins. The arrangement is shown in *Fig. 2* and can also be seen in

Fig. 3. Below the chutes on the next floor are what are known as and have just been referred to as garner. These are simply square bins holding 1,000 bushels each. Immediately under each is a hopper scale with its bin of the same size as the garner above it, and receiving grain from the garner, when desired. Here the grain is weighed. The garner, it will be seen, can receive grain during the operations of weighing and discharging the weighing bin, and when the latter is emptied can at once refill it. In *Fig. 3* the garner and weighing bins are shown. In *Fig. 6* one of the scales and weighing bins is illustrated. A hand hole is provided for each weighing bin whence samples can be drawn. This is shown also in *Fig. 6*.

From each weighing bin the grain is delivered into the bins. These range in size from 500 to 7,000 bushels' capacity, so as to suit every requirement. Much of the grain received is graded and an equivalent weight of grain of the same grade is delivered when called for. Other grain is received to be received with its "identity preserved." In this case, the specific grain and no other

marks with chalk the contents of the particular bin, the bushels of grain, its kind, grade, etc. For different classes of grain different colored chalk is used.

Again the bins are divided into storage, elevating and delivery bins. These inter-connect by the elevators and chutes. Accordingly above the blackboard proper is a plan of the system of elevators and chutes, so that the proper course to be followed by grain under any given circumstances is at once seen.

The bins all terminate some distance above the ground level. A train of cars has ample head room below them. From the level of the bottoms of the bins to the weighing floor the entire area is devoted to the honeycomb of bins, except the few small trunks through which the elevator belts travel or through which grain descends into bins situated under other ones. A space at one end is also free for the great driving belt to travel in.

The elevator belts descend into receiving sinks below the ground surface into which grain to be elevated is delivered. At intervals along the platforms forming the bottom floor are trap doors giving access to these sinks. Grain never remains there, but it is at once elevated.

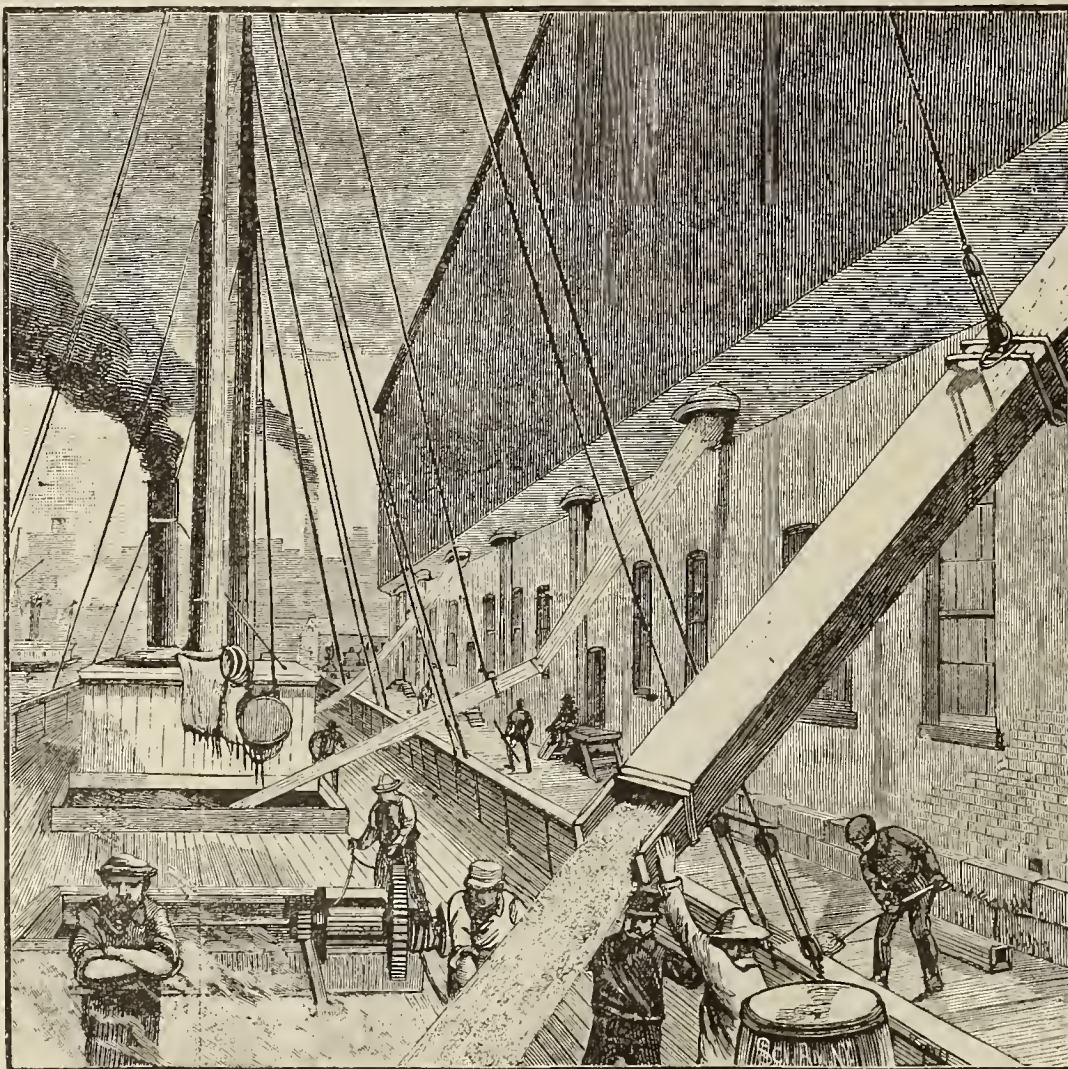
One of the cuts, *Fig. 5*, shows how it is delivered from cars into the sinks. A steam shovel is employed. This is a scraper about three feet square to which a rope is attached. The operative draws the shovel back into the car of grain and holds it nearly vertical and presses down into the grain. The rope draws along the shovel with the grain in front of it and a number of bushels are delivered at each stroke. In this way a couple of men can very quickly empty a car. The movements of the shovels succeed one another with sufficient rapidity to keep the men in active movement.

One of the features of this elevator is the use of the electric light. It is equipped with lights so arranged as to light the interior of cars, so that night work can be carried on. In the recent heavy grain deliveries it was found necessary to work day and night.

The portion of such elevators containing the bins is built without framing. Planks are laid flatwise upon each other and spiked through to the layer below. In this way the outer walls and the bin division are built up, giving great strength and power to resist lateral pressure. A usual timber for the sides is 2x8 inch spruce, giving eight-inch walls, and for the bins 2x6 inch is often employed. The Armour Elevator

contains over 8,000,000 feet of wood and about 4,000 kegs of nails were used in its construction. The main building is bricked in outside of the timber walls, and the roofs and cupola walls are covered with tin. It was erected between June, 1887, and March, 1888, being put in operation on the last named date. It cost about \$ 00,000.—*Scientific American*.

The Dakota Farmer sent out several hundred circular letters, with a view to ascertaining as nearly as possible correct figures as to acreage and the yield in each of the several counties of South Dakota of wheat, oats, corn, rye, barley, potatoes and flax. Following is the result in acreage and yield per acre: The total acreage of oats the present year is 683,712; average yield, 39.7 bushels per acre, making a total of 27,207,037 bushels. Total corn, 992,566 acres, averaging a little over 26 bushels per acre, equal to 25,401,000 bushels for the state, less five counties not reported. The barley harvest was good, 204,243 acres giving an average yield of 25.2 bushels per acre, making a total of 5,142,963 bushels. Rye acreage, 34,308; average, 20.2 bushels; total, 686,145 bushels. The flax, although 6,500 acres less than last year, is 365,050, yielding over 9 bushels per acre, or a total of 3,549,304 bushels. Potatoes overrun all estimates, the total yield from 37,167 acres being 4,076,429 bushels, an average of 112 bushels per acre.



HANDLING GRAIN IN A CHICAGO ELEVATOR.

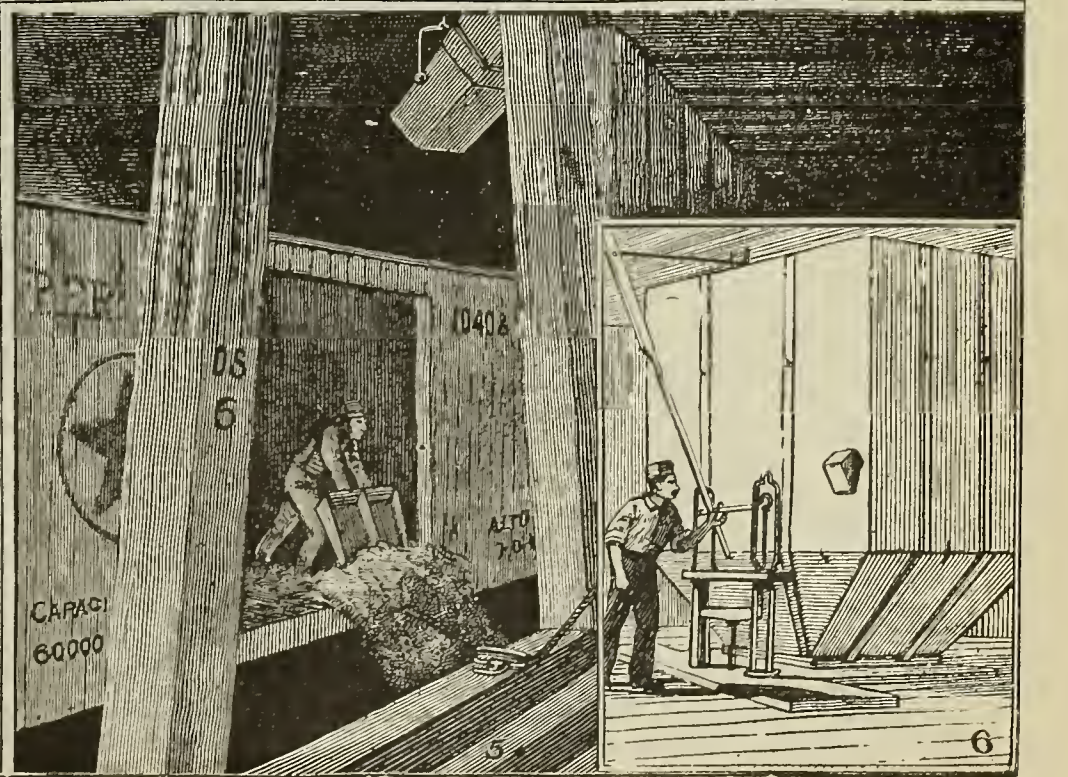
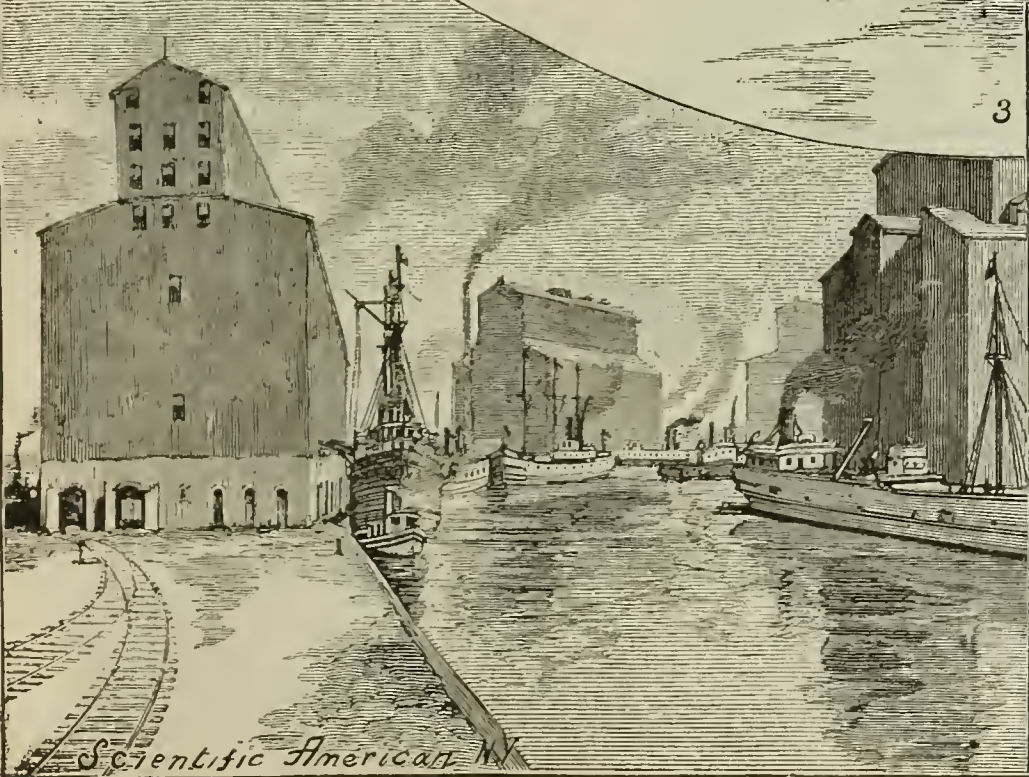
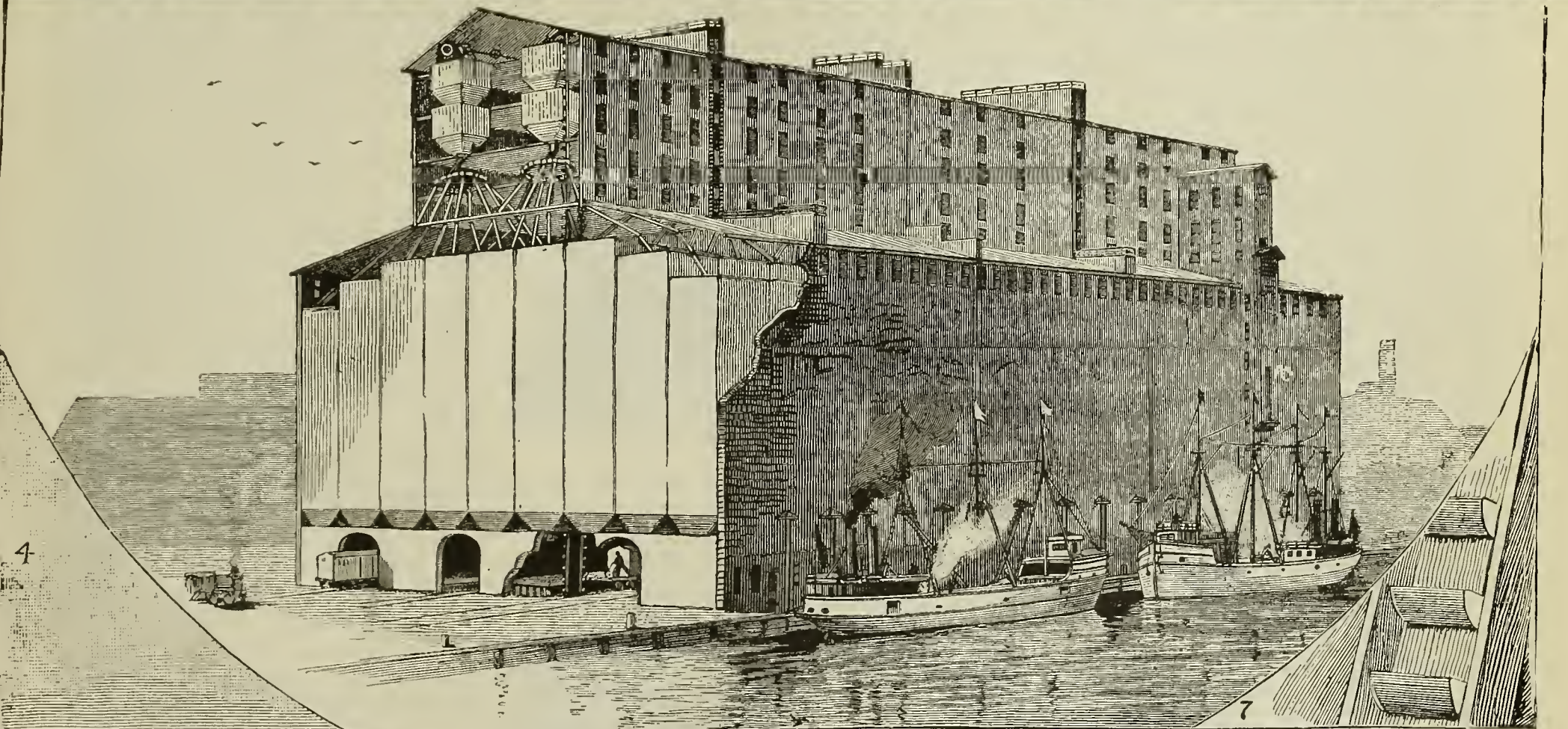
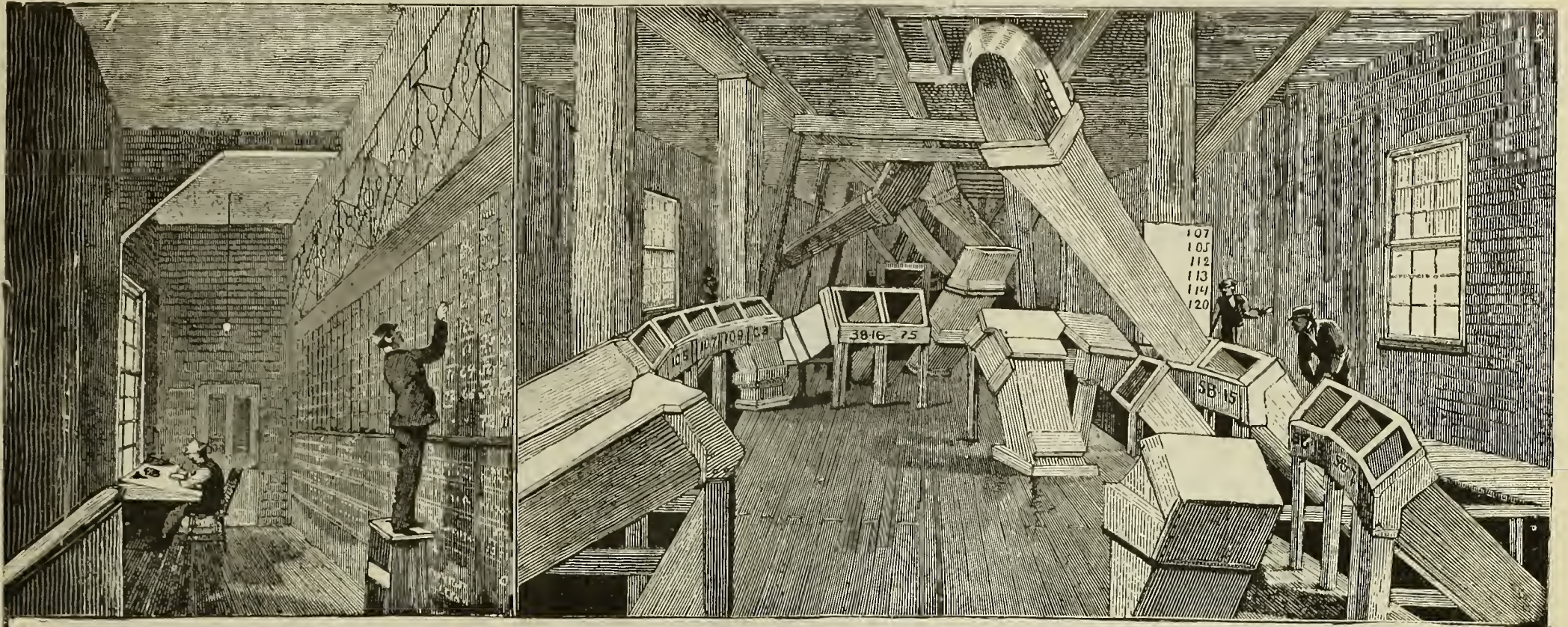
must be delivered on call. The great variety in size of bins adapts the elevator to this work.

The garner, weighing bins and storage bins have sloping bottoms, so that no grain lodges in them. An inclination of six inches in a foot is sufficient to insure this.

Grain is weighed once when received and once when delivered. Each weighing operation involves the elevation of the grain from the lower floor, where the bins deliver it clear to the top of the building, for delivery through the revolver and fixed chute to the proper scale.

Transfer elevators are employed to effect the transfer of grain from one bin to another. These elevate it so that it can descend through inclined chutes in the desired direction. If the chute does not carry it far enough, one or more additional elevators and chutes are called into requisition.

A vast amount of complication is involved in the perpetual filling and emptying of bins, due to the receiving, delivery and transfer of grain among the number of bins and pockets of the great building. The receiver's office is shown in *Fig. 1*. In this room the record is kept. It contains a large blackboard divided into squares. Each square denotes a bin and is numbered in accordance with the bin number. The numbers are the same as those painted on the mouths of the fixed chutes as shown in *Fig. 2* of the cuts. Upon each square the accountant



Scientific American N.Y.

HANDLING GRAIN IN A CHICAGO ELEVATOR.

TO FIND SPEED OF ELEVATOR BELT.

Five-foot pulley, 43 revolutions. Find the circumference in feet by multiplying 5 feet by 3.1416=15.7080. Multiply this product by the revolution, and the result is 675 feet of travel per minute. Our buckets will discharge perfectly all standard grains at this speed. When light, fluffy material is to be elevated, or heavy, sticky material, we will give you the proper speed by correspondence. When our instructions are followed as to speed of elevators, we guarantee results. We see throughout the country many elevators where the belt is cutting into the wooden leg or trunk, and the buckets scraping the back leg. If this does not cause fire, it will speedily ruin the belt. Give preference to large pulleys in heads of elevators.—H. W. Caldwell & Son's Catalogue.

GRAIN ELEVATORS IN INDIA.

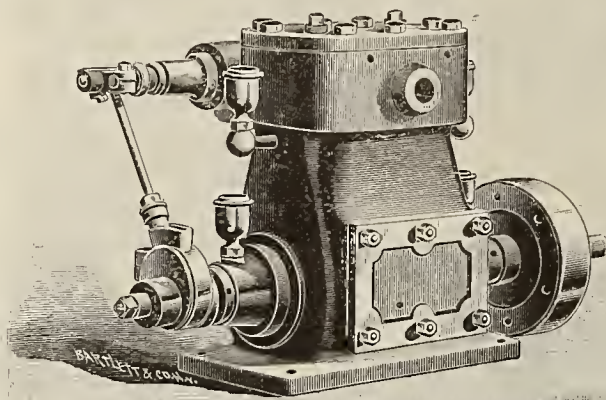
The report of the Bombay Chamber of Commerce for the year 1890 contains an interesting correspondence on the subject of grain elevators. In the September of 1889 a proposal was laid before the government of India by Mr. James G. Smith, for founding an Indian elevator company, which should work in India on the lines of the great elevator companies of the United States. That is to say, this company was to undertake to clean, grade and store wheat, to deliver "grain receipts," which should be transferable, like their prototypes in America; and also to issue "certificates" which, it was suggested, should be countersigned by an official appointed by the government. The promoters of the scheme held that a fair start might be made with a capital so small as £25 000, but asked of the Government a guarantee of 4 per cent. for the first five years' work, such advances to be repayable, without interest, from one-half of such surplus profits as should exceed 6 per cent. The government was also asked for grants of free land for the company's purposes, and for a sort of monopoly of the business for a term of five and twenty years. Some of these claims certainly seem large, but the scheme was carefully considered by the Indian Government, and, as usual, the opinions of experts were taken. Colonel Filgate, R. E., was strongly in favor of the enterprise, while that authority on Indian and other wheats, Mr. John McDougall, though advocating the establishment of grain elevators as a necessity for India, pronounced against the grant of any sort of monopoly to private firms, counseling the government to take the scheme into its own hands.

A decidedly adverse view was received from Mr. John Marshall, the secretary to the Bombay Chamber of Commerce. Mr. Marshall, speaking on behalf of the committee and of other members of the chamber, many of whom were reported to be up-country buyers and exporters, declared elevators to be unsuited to the requirements of the country, and to be financially impracticable. He pointed out with some force the difference in the conditions of Indian and American agriculture. In the United States large tracts are sown with the same kind of wheat, and thus grading is a comparatively easy task. There are many railways, so that every means is at hand for quickly and cheaply taking cereal crops to central points, while the climate renders the storing of produce in warehouses a necessity. All these conditions are, it is urged, absent or reversed in India. The wheats grown are of too varied a character to be graded without much greater labor than is entailed in America. With the still undeveloped railway system, facilities for conveying grain to central points are few; while, on the other hand, the cheapness of labor is calculated to take a large discount off the economy effected by handling grain on a large scale and by machinery. The heaviest objections brought forward by Mr. Marshall are based on the climate. He says that "for seven or eight months of the year grain can be safely kept in the open air without expense for either rent, fire insurance or other charges incidental to warehousing; while during the other four or five months the native system of storing in pits is not only inexpensive, but gives immunity from weevils which no mode of warehousing insures. The loss in weight from this cause alone during the mousoon would probably be not less than 5 per cent., not to speak of the still more serious

damage to quality which results; and for this reason alone, if no other objection existed, the members of the chamber consider that elevators would prove unsuitable and impracticable."

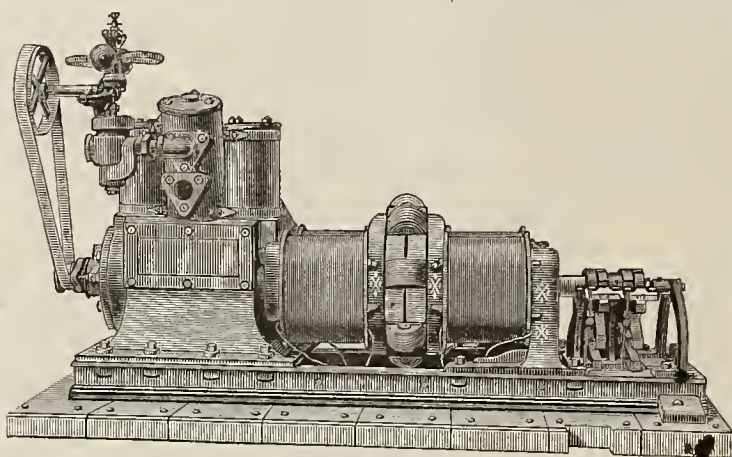
THE EVOLUTION OF THE DIRECT-CONNECTED DYNAMO.

It is an interesting fact that The Westinghouse Machine Company was the builder of the first direct-connected dynamos in the United States, if not in the world. In



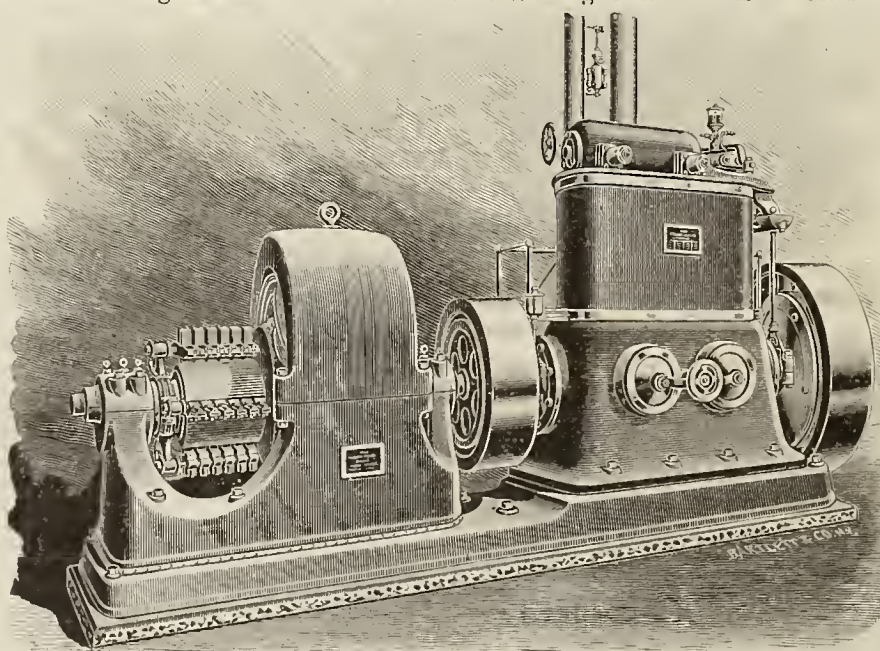
FIRST WESTINGHOUSE STEAM ENGINE, A. D. 1880.

fact, the idea of a direct-connected dynamo is responsible for the Westinghouse Single-Acting Engine. In 1880 the Brush Electric Company conceived the application of



FIRST DIRECT-CONNECTED DYNAMO, STILL IN USE AT THE U. S. GOVERNMENT TORPEDO STATION, NEWPORT, R. I.

the electric arc for locomotive head lights. Belt transmission being out of the question, the problem of a direct engine was laid before Mr. H. H. Westinghouse of Pitts-



THE PRESENT WESTINGHOUSE ELECTRICAL GENERATOR.

burg, for solution. The terms of the problem were stated about as follows: The speed must not be less than 1,000 revolutions, and the power developed not less than 1½ net horse power. The engine must be able to stand up under 150 to 180 pounds of steam; it must be self-contained, so as to be bolted to the locomotive, like a brake pump; it must be sufficiently rigid, so as to stand all the shock and jar of service; it must be inclosed completely, as a protection from dust and cinders; and finally, it must be capable not only of several hours continuous running without attention and of continuous service day

after day, but must be of such a design as to run for an indefinite time without any attention whatsoever, while the locomotive is side-tracked and the engineer absent. It is evident that the one solution possible was the Single-Acting, Self-Contained and Self-Lubricating Engine. It is interesting to note that with no original thought beyond some special application of this kind, the above type of engine has propagated itself without essential modification until it has developed a business of the present enormous proportions involving compound and triple-expansion engines up to 1,000-horse power. The original engine, whose history we have recited, now fills with dignity the position of centerpiece in the office of The Westinghouse Machine Company at Pittsburg.

A more serious attempt following the comparative success of the locomotive experiment was the constructing of several short-stroke engines developing about 10-horse power for coupling direct to Brush machines at 800 to 1,000 revolutions. A number of these were built and operated successfully—one at least after ten years of service is still regarded as the most reliable engine in the experimental plant of United States Government Torpedo Station at Newport, R. I.

The Single-Acting Engine has fairly proved its right of inheritance to this special trade. The primary idea of forcing an engine to an abnormal speed to meet the supposed demand of the dynamo was unnatural and wrong. The commercial conditions of electrical construction at that time prohibited any compromise, but the present state of electric art has changed all this, and the reasonable idea now prevails of cutting down the speed of the dynamo instead, to the normal speed of the engine. This is commercially possible within fair limits, and the Single-Acting Engine with its natural capacity for high speed forms a complete solution of the problem.

THE MIDDLEMAN IN GRAIN.

"How much do the middlemen make between the Kansas corn fields and the Liverpool grain dealer out of a bushel of corn?" a leading shipper on the Chicago Board of Trade repeated yesterday when that question was asked him. Then after a little figuring he replied: "About 1½ cents a bushel in actual profit. The rest of the difference between the price of corn in Kansas and Liverpool goes to pay freight, elevator and handling charges, marine and fire insurance, and the like."

Perhaps no other business in the world is done on so small a profit and with so little risk as is the handling of the crops of this great country. In the course of time the element of speculation in the actual handling of the grain has been almost obliterated. From being one of the most uncertain things in the world, grain shipping has become one of the most certain. The gambling, of which the Farmers' Alliance has long been the sworn enemy, no longer exists when wheat becomes sixty pounds to the bushel and corn fifty-six.

It is somewhat strange that so few people know how the crops are moved. Ten thousand journals daily detail the grain market. Reports of the "visible supply" register weekly the stages of the great stream of grain, and the quotations reflect its movement, but the people who have stopped long enough to learn of the actual handling of the grain are now many. Farmers' Alliances and granger legislators see in the Chicago Board of Trade and its dealing in options only a great gambling institution. They do not realize that the movement of grain on the American continent, and to a large extent throughout the world, is governed by the Chicago Board of Trade and the New York Produce Exchange. It is this very "gambling" that removes all gambling when the actual grain is handled, and makes possible the movement of the crops at profits so small to the middlemen that they seem infinitesimal.

The removal of grain from the country buyer to the foreign seller is one vast system of hedging.

It was not many years ago that the country buyer sent his wheat to Chicago to sell at any price he could obtain after the grain reached here. Now the country buyer sells on the Board of Trade as rapidly as he secures the grain at home. He no longer takes any chances. He has a dead sure thing for his profit, and competition between buyers has forced their profit down to a very small margin.

When Chicago elevator men began buying grain in the country some five years ago in order to secure business for elevators, the system of country buying, however, changed to a considerable degree. The thousand arms of the Chicago elevator companies gather the grain to this city, either by local buyers on commission or by direct agents. But in whatever way the grain comes the same system of hedging is followed. For every bushel bought in the West another bushel is sold for delivery, perhaps six months ahead. The difference between the cash stuff and the future option is the profit of the Chicago elevator companies. Sometimes it happens that the elevator companies with unlimited capital behind them buy solely to obtain business for their elevators. Their profits are small, outside of storage charges, and not seldom they pocket an actual loss of a quarter of a cent a bushel in order to get the grain in the elevators.

The Chicago shipper who buys this grain at once sells in the pit as much as he has bought. He offers the grain for sale to the buyer in New York, Baltimore or Philadelphia; that is, he adds cost, or the then present price of cash grain, insurance and freight together, and makes this price. For instance, if corn is 40 cents in Chicago and the freight to New York is 7 cents, he is quite likely to offer the shipment at 48½ cents, the added 1½ cents including commission and insurance. If the offer is accepted, the shipper buys the option he has out against that much grain. In other words, he buys back the corn he had sold as protection. Whichever way the market goes he can neither lose nor win, for he has sold just as much corn as he has bought, and bought just as much corn as he has sold. He is certain only of his commission.

Nor has the man who bought from Chicago shippers been taking any risk. Either he has the grain sold for export or has sold options for a like amount the instant he received his Chicago message. He, too, must be satisfied with his commission. Thus the grain has traveled from Kansas to Liverpool with three handlings, whose total cost in no instance has exceeded 1½ cents.

More and more the exporter hedges his trades. If he grain is shipped before he has an order for it, he protects the trade by selling an equal amount of grain in Chicago or New York. English grain dealers who are bringing cargoes from Australia, India or the Pacific coast, frequently sell on the Chicago Board of Trade a like amount of grain for delivery the month it reaches Liverpool. When the grain reaches the home market it is sold and the option against it here is bought in.

In Liverpool the grain is piled up in sheds on the quay and is sold to millers and consumers throughout the United Kingdom. The dealers have regular customers whom they supply, and the business is not unlike the jobbing trade. But even the English dealer sometimes hedges. When he thinks grain is going down and he has a large stock on hand, he cables New York or Chicago to sell options for the amount of grain he has in stock.

It would be hard to find in all the world another business with as little risk in it as the forwarding of grain. The exporter takes few chances, even in ocean freights, and boats that are five, six or seven thousand miles away are chartered months before they arrive. The Chicago shipper contracts for his freight to the seaboard before he closes a sale. Every nook where chance might lurk is carefully watched.

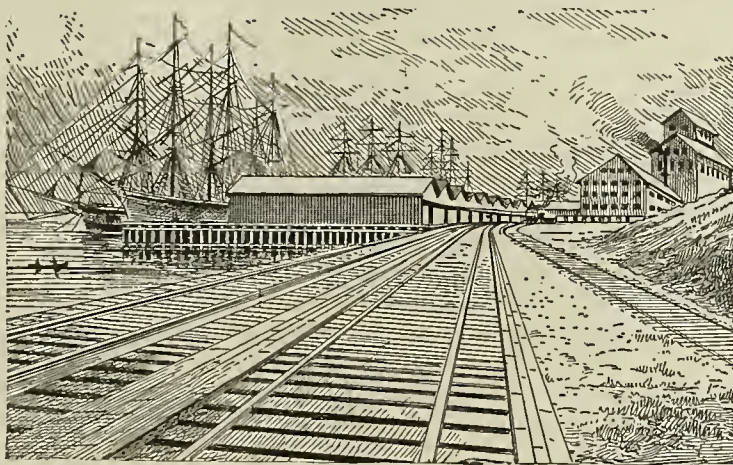
This great traffic has grown up on a basis of what is called "board of trade gambling." If the dealing in grain for future delivery was done away with, the grain trade of the world must needs be reconstructed. Were it so that grain could not be sold until it arrived in Chicago, New York and other receiving points, this traffic of hundreds of millions of dollars, now the safest in the world, would become one of the most uncertain. If there is gambling on the Board of Trade now, the gambling in the actual grain has largely ceased.

The New England grain trade is on a somewhat different basis than the movement of the surplus to foreign countries. In that trade there is more of the element of "jobbing." The grain is sort of peddled out to purchasers throughout the New England states for actual consumption. The grain is frequently sent forward before being sold, and then it is sent to its destination from lake ports where it had been stored. But even in the New England trade shippers hedge all that it is possible by selling options as they buy in the actual grain, and then buy in their options as they sell their holdings.

Of course there is an element of gambling running

through all business which sometimes appears in grain shipping. Once in a while the shipper thinks lake freights will go lower, and then he holds off chartering boats for a drop in lake rates. In this he sometimes succeeds, and then again he gets pinched by the vesselmen putting up the rates. He may not always sell options as fast as he buys the grain, nor may he at all times buy in his options as soon as he has made a sale, but all these causes are exceptions in the regular grain shipping trade. Now and then, as in the recent corn corner, an immense amount of grain is started forward before purchasers have been found for it. More frequently speculators buy the cash grain and start it on its way to New York, figuring that they can sell it at a substantial advance when it arrives there. But if all these exceptions to the general rule of the trade were added together it would be found that they did not exceed 5 per cent. of the total volume of grain shipments.

One of the heaviest grain shippers on the Chicago Board of Trade is George Boyden of Boyden & Co. "The handling of grain as at present based on selling for future delivery," said he recently, "has one side that I have never seen brought out in all the discussions about all the Board of Trade 'gambling.' It permits the accumulation of grain in the lake ports during the winter, and thereby makes a great saving to the farmers in the way of freight charges. Supposing the grain had to be pushed along to market throughout the winter, as it would be if it could not be sold for future delivery. Last winter the rail freight to Buffalo was 8 4-10 cents a bushel. Now the lake rate is 2½ cents. To New York the rail freight is 14 cents a bushel, as compared to about 7 cents lake and canal, and 7½ cents lake and rail. Here is a direct saving of half, due solely to option dealing on the Board.



WHEAT VESSELS AND WAREHOUSES ON THE PACIFIC COAST.

If the grain could not be sold until it was in Chicago we would be swamped by the big receipts after the crops are gathered, and prices would sink below their normal level. Then when farmers could not haul their grain to the country stations prices would be forced skyward. The people who are so bitter against the Chicago Board of Trade would do well to consider if they would care to sell their grain on the same basis that they disposed of their hogs last fall and winter. That is a fair illustration of the two systems."

But as to the handling of so many pounds of grain. When the grain arrives in Chicago it is usually inspected and given a grade fixed by state law. If poorer or better than the contract grades, it is oftentimes sold by sample. Samplers are regularly employed, and are paid 10 cents a car. The samples are taken on 'Change and the grain is then sold like so much calico. The purchaser turns the samples over to an employe, who visits the car to see if the grain is up to the sample. It is seldom that a discrepancy is found. If the grain is graded it goes into the elevator and is mixed with other grain of the same grade, losing its identity like water poured into water. White oats and high colored corn are frequently sold by samples.

One inspection is not deemed sufficient, and when the grain goes out of the elevator it is again inspected. Once in a while the "out" inspector will not allow the grade which the "in" inspector gave it. Then there is trouble, because the purchaser insists on having as good grain as he bought. It is a time when the office of state grain inspector is not a sinecure.

The grain traffic by railroad to the seaboard during the season of navigation cuts but a very small figure in the trade. It is conducted on no important particulars on different planes than when shipments are made by lake. It is the same endless hedging against changes in the market.

The time consumed in closing a sale of a big block of grain will probably not average over five minutes. It is not seldom that trades involving from \$50,000 to \$200,000 are closed within three minutes after the first telegram was passed into the hands of the telegraph company.—*Homer J. Carr in the Chicago Press.*

WHEAT IN WASHINGTON.

The state of Washington embraces an area of fertile grain-growing soil that will make it the greatest wheat region in the United States in less than another decade. Quite a number of varieties are raised, among which are the Red Chaff, Little Club and Chile Club, Scotch Fife and Blue Stem, the latter being the most extensively sown. While a number of varieties of hard wheat have been experimented with satisfactorily, the wheat appears to gradually develop into a soft wheat.

Wheat is grown in both Western and Eastern Washington, but it is east of the Cascade Range that the large fields are found, that grown west of the mountains being on small tracts and principally for local consumption, and not much effort is made to produce a sufficient quantity to make it an exportable product. In the eastern part of the state there are three great districts—the Big Bend, located in about the geographical center of the state, and getting its name from the rather peculiar course of the Columbia River, as it meanders around, forming the northern, western and part of the southern boundary of Douglas county; the Palouse Valley district, which extends out from and along the Snake River, has given the larger portion of the state's yield. The third district is the Walla Walla Valley. The climatic conditions in all the wheat-producing area east of the mountains are

practically identical, though the range of temperature in the Walla Walla section is probably less than in the others, and notably in the Big Bend section. The Walla Walla district also has a somewhat smaller annual rainfall, though ample for all purposes of wheat production, being about 18 inches. All the Eastern Washington wheat lands may be said to resemble the famous lands of Italy, which for many centuries have given bread to a dense population, and have seemed inexhaustible. The soil ranges from 10 to 100 feet in depth, and contains in almost perfect measure all those silicates and salts that are necessary elements to the profitable cultivation of cereals. The soil is a sedimentary deposit, and is apparently of volcanic origin, being made up of a sandy loam, disintegrated basalt and ash. The porous character of the soil is admirable, taking in moisture readily, and permitting the constituents of the soil to rise to meet the demands of the growing plant.

The average yield per acre in Washington is the largest of any state in the Union, while the crop has always been found a certainty. The Eastern Washington wheat fields have a record for producing the highest annual average yield on land planted successively for many years to wheat without fertilizing and without failure of any locality in the world. Yields of 100 bushels per acre, in occasional exceptional cases, are well authenticated. One of the best averages reported authoritatively is that of a 1,000-acre farm producing 50,000 bushels of good merchantable wheat.

LARGE CARGOES AT PHILADELPHIA.

The largest cargo of grain ever loaded at this port was that of the steamship Pocahontas at the Girard Point elevator on April 19, 1890, when 133,174 bushels were loaded, and while there is no record of the actual time consumed, it was not much over a day. Among other large cargoes loaded there are the following: Aug. 20, 1891, steamship Inverness, 110,000 bushels; Aug. 21, 1891, steamship Kendall, 114,400 bushels; Aug. 25, 1891, steamship Mayfield, 125,000 bushels.

The tendency now in the grain carrying trade is toward large vessels and cars of nearly double the capacity of ten or fifteen years ago. Then from 50,000 to 75,000 bushels of grain was considered an extraordinary cargo for a vessel and 500 bushels for a freight car. Now the capacity of the cars has been doubled, while a vessel carrying a cargo of 100,000 bushels and over is the proper thing.—*Philadelphia Record.*

The receipts of the Minnesota state grain inspection department for September greatly exceed those for any preceding month.

COMMUNICATED

[We invite correspondence from every one in any way interested in the grain trade, on all topics connected therewith. We wish to see a general exchange of opinion on all subjects which pertain to the interest of the trade at large, or any branch of it.]

CANNOT DO WITHOUT.

Editor American Elevator and Grain Trade:—Inclosed please find \$1, for which send me the AMERICAN ELEVATOR AND GRAIN TRADE for one year. I value your journal too highly to do without it.

Yours truly, L. CORTELYON.
Muscotah, Kan.

BUILDING.

Editor American Elevator and Grain Trade:—We are building an elevator of 30,000 bushels' capacity in addition to our present storage capacity; and are putting in a new line of cleaning machinery. Wishing you every success,

Yours, etc., SMITH & BRIGHAM.
Moosomin, Assa.

SOLD OUT.

Editor American Elevator and Grain Trade:—I have sold my elevators here to Edward Johnson and am out of the grain trade. When the time of my subscription to the AMERICAN ELEVATOR AND GRAIN TRADE expires I will try to have my successor take your valuable journal.

Yours respectfully, P. EMMERT.
Osco, Ill.

A WISE DECISION.

Editor American Elevator and Grain Trade:—As we had an elevator built this month by Heidenreich Company, builders of grain elevators of 99 and 101 Metropolitan Block, Chicago, we think we had better subscribe for your journal. Inclosed please find \$1, for which send us the AMERICAN ELEVATOR AND GRAIN TRADE for one year.

Yours truly, C. HORN & SON.
Crete, Ill.

WHEAT IN NORTH DAKOTA.

Editor American Elevator and Grain Trade:—The yield of crops in this vicinity is large. Wheat yielded 25 to 40 bushels per acre, but the quality is poor, owing to frost and wet weather since the harvest. Notwithstanding many extra threshing machines have been shipped in, almost 50 per cent. of the threshing is still undone (Nov. 3). We would like to correspond with a few leading consumers of flaxseed in and around Chicago.

Very truly, WIGHTMAN & BROPHY.
Hannaford, Griggs Co., N. D.

NEW ELEVATORS.

Editor American Elevator and Grain Trade:—I have built three elevators this season and three flat houses for the Hunting Elevator Company of McGregor, Ia., in Western Iowa and South Dakota, and have a 20,000-bushel house to build at Lyle, Minn. Your more than valuable journal reaches me, and I read it with interest and profit. The first copy that came to my notice was the August number, and I sat down and sent in my subscription, and I must say I am more than paid already.

Truly yours, J. F. WIER.
Lansing, Ia.

ELEVATOR CHARGES AT TOLEDO.

Editor American Elevator and Grain Trade:—Until further notice, on all sound grain, elevating charges, including storage for ten days or any part thereof in the elevators of the Toledo & Wabash Elevator Company, will be ½ of a cent per bushel, and for each succeeding ten days or any part thereof a storage charge of ¼ of a cent a bushel.

Wishing to utilize our storage room to a fuller extent, we make the specially low rate on a limited quantity of grain for winter storage (exclusive of elevating charges) from Oct. 1, 1891, to April 15, 1892, inclusive, the same as summer rates, except in cases where storage has accumulated, as follows:

On and after Oct. 1, 1891, to Nov. 1, 1891, ½ cent a bushel.

Nov. 1, 1891, to Dec. 1, 1891, ½ cent a bushel.

Oct. 1, 1891, to Dec. 1, 1891, ¾ cent a bushel.
Dec. 1, 1891, to April 15, 1892, 2½ cents a bushel.
Oct. 1, 1891, to April 15, 1892, 3 cents a bushel.
After which there will be no further storage charge until and including April 15, 1892.

I. E. HAVILAND,
Toledo, O. Superintendent.

ELEVATORS AT FORT WILLIAM, ONT.

Editor American Elevator and Grain Trade:—The Canadian Pacific Railway Elevators at Fort William are known as the "A" and "B." The capacity of each of these is 1,200,000 bushels. The one at Port Arthur is of 300,000 bushels' capacity. All are worked by steam. The engines in the Fort William elevators are 500 horse power each. The one at Port Arthur is 100-horse power. We have cleaning and scouring machinery in each building. Inclosed find \$1, for which send me the AMERICAN ELEVATOR AND GRAIN TRADE for one year.

Yours truly, M. SELLERS.
Fort William, Ont.

WICHITA AS A GRAIN MARKET.

Editor American Elevator and Grain Trade:—Kansas comes to the front this year with another enormous yield of corn, wheat and oats, which will nearly equal if not exceed that of 1889.

In 1889 Sedgwick county, Kansas, produced 10,630,931 bushels of corn, wheat and oats, or nearly three times the amount produced in Maine, which was 4,387,000 bushels. When it is understood that Sedgwick county is only one-thirty-third as large as Maine, this comparison will show what a wonderfully rich agricultural country Kansas must be. The crop of 1891 in this county will reach 10,500,000 bushels of these cereals.

Within a radius of 100 miles of Wichita, Kan., it is estimated the 1891 crop will amount to over 150,000,000 bushels. Wichita is 685 miles from Chicago on the lakes and 719 miles from Galveston on the Gulf, but is exactly 600 miles in an air-line from both cities.

With the enormous amount of grain produced so near Wichita, this city is without large elevators to clean and handle it. I find warehouses and other buildings are being used to store and handle the incoming grain. Here is business enough for a 1,000,000-bushel elevator, and it is a surprise to me that some Chicago man has not taken advantage of the opportunity. I find a first-class grain inspection has been established by the Board of Trade. Mr. Joseph Maxwell is the deputy state grain inspector, and is perfectly reliable. The shipments of grain from here are made to Chicago, Kansas City, St. Louis, Memphis, New Orleans, Galveston, Denver, and points in New Mexico.

Wichita is destined to become a large grain market because of its direct rail connection to nearly every other market point and the immense amount of grain raised in the country tributary.

Respectfully, P.

McEVY LAW NOT DECIDED UNCONSTITUTIONAL.

Editor American Elevator and Grain Trade:—In the October issue of the AMERICAN ELEVATOR AND GRAIN TRADE under the head of "New York Elevator Charges" you are most aggravatingly mistaken in saying that the McEvoy Elevator Law was decided by the state courts to be unconstitutional.

The McEvoy elevator bill passed the Assembly first by a vote of four to one, the Senate by a vote of three to one, and Gov. David B. Hill put his signature to the measure. And this most righteous law was sustained by the District Courts of Buffalo and New York. Then the railroad elevator magnates appealed to the Supreme Court and were beaten. Then they appealed to the Court of Appeals and were again beaten. In fact, the Illinois grain elevator law and the New York elevator law were both sustained by every court they were tried in, including, in the Illinois case, the United States Supreme Court.

The title to this case should read:

The people of the Eastern and Northwestern states

vs.

The railroad grain elevator combine, which is largely owned by foreign capitalists.

This case has been put off until the second Monday in November on account of the illness of Chief Justice Fuller's daughter, also the absence of two other justices when the Supreme Court was convened. Counselor I. A. Hyland, who has been employed by the Erie boatmen to defend the law in every court, is the picture of cheer-

fulness when he is asked how he expects to come out of the United States Supreme Court. Of course, this, from a financial standpoint, is the most important case ever tried in the United States and we will soon know if railroad companies which are owned and controlled by foreign capitalists will be aided by our highest tribunal in closing the Erie Canal.

Yours respectfully, CAPT. M. DEPUY,
President of the Canal and Harbor Protection Union of the State of New York.

GRAIN IN TRANSIT AT MISSOURI RIVER POINTS.

The several lines terminating at Kansas City, Leavenworth, Atchison and St. Joseph have agreed that grain originating as below, which is stopped in transit at either Missouri River points above named, shall be subject to the following rules, effective Oct. 1:

Grain originating at stations upon lines west of the Missouri River may be way-billed to consignees at Southwestern Missouri River points and be consigned thence at proportionate rates, thereby protecting the published rate from initial point to destination. This may include grain from stations east of the Missouri River, when destined to points in states south and southeast of Kansas.

The business shall be subject to supervision by a joint agency, to be established by and conducted pursuant to directions from the chairman of the Western Freight Trans-Missouri and Southwestern Railway and Steamship Associations.

The said chairman shall appoint a joint agent and such assistants or other employees as may be necessary to an adequate check upon the grain movement into and out of elevators at Southwestern Missouri River points.

Record shall be kept by such joint agent of the grain placed in elevators by the registration of the expense bills therefor, in the order of unloading into the said elevators, the joint agent to arrange the details necessary to accomplish this result.

Grain shipped from time to time on local rates, or taken out of elevators by teams or other means for local consumption, shall be charged off the joint agent's books daily, on the same basis as grain shipped through, the elevator companies being notified daily of the expense bills thus canceled.

It shall be obligatory upon all lines, members of the three associations hereinbefore named, to submit all billing covering grain subject to transit privileges to the inspection of the joint agent's office and the regulations imposed thereby.

Inasmuch as the identity of track grain can readily be preserved, no safeguard in that respect is deemed necessary excepting that the joint agent be required to insure the charging of proper rates thereon.

Transfers of expense bills, elevator tickets or bills of lading (except shipper's order bills of lading), should be by formal assignment or order; indorsements in blank should not be accepted.

Shippers detected in using expense bills for cars not actually unloaded into elevators, or in furnishing billing not bona fide in all particulars, or in resorting to any practice in reassigning grain which tends to reduce the legitimate revenues of the railroad companies, shall be reported to the commercial organization whose obligations have thus been violated.

In reassigning from elevators the weight should not exceed that shown on the expense bill used in securing the re-shipment; and the weight shown on expense bill surrendered should in no case be less than the weight billed out, provided that nothing herein contained shall prevent the cars from being loaded to the maximum carrying capacity of the car, subject to the inspection and approval of the agent, as authorized from time to time by the three chairmen.

It would appear that wheat, corn, peas and rye are not the only cereals that will be required by Great Britain and the Continent from this side during the coming season, as shipments of new oats have already been made from this port for Glasgow. Sales have also been made in Eastern Ontario for export to Great Britain on the basis of 34 cents per 34 pounds with a 17½ cents freight rate to Boston. Samples have been exhibited in this city of Ontario white oats showing superb quality, and there is every prospect of a good export trade, providing, of course, that growers do not exact too high figures and thus cut it off. Some farmers, we regret to say, have been careless in selecting their seed, as several carloads of new oats received in this city have been graded rejected, owing to their being mixed with barley and other foreign substances.—*Trade Bulletin, Montreal.*

A large per cent. of the grain in the north half of North Dakota and of Northern Minnesota was "frosted." In the same vicinity much grain stood in the field suffering further deterioration through failure of farmers to obtain help enough to take proper care of it after cutting. It is perhaps safe to say that no less than a large per cent. of all the grain in that northern belt of heavy wheat production is injured by one or the other of the weather conditions mentioned. Buyers cannot take that grain without making prices to correspond, and there will necessarily be great annoyance on account of it. More or less of that frosted wheat is carried in the grades so that it is found there is risk in buying or handling it excepting by sample. The southern and middle portions of Minnesota and the Dakotas are mainly exempt from the unsatisfactory conditions and qualities mentioned.

LIVERPOOL QUOTATIONS.

We have a courteous letter from the Western Union Telegraph author ties saying that the resolutions of this exchange calling attention to Liverpool quotations have stimulated the Associated Press to look into and improve the system. The question has been discussed by the different Western exchanges, and we hope to see more intelligible work in that line ere long. We hope to make it clear to London and Liverpool dealers that the wheat exported from the seaboard does not represent Western No. 2 when the same is inspected out of our elevators.—*Toledo Market Report.*

CORNERS IN GRAIN.

BY B. P. HUTCHINSON.

Men sometimes discuss the chances of being able to buy all the wheat in the market, by which they mean the visible stock. There are two enormous difficulties in the way of such a performance, either of which must always remain nearly insurmountable; but which, acting together, as they always do, form an absolutely impassable barrier. The fact is that no single individual or combination of individuals, no matter how much capital he or they may control, has ever been able to buy all the wheat in the market; the second is that the visible stock is an uncertain and unknown quantity, and forever expands just in proportion as the needs of the speculator call upon it to contract, or at least to remain fixed. The visible supply is a figment of the agricultural reports; the agricultural reports are really hearsay, and in our courts of justice hearsay, even if sworn to, is not admitted in evidence. Therefore unsworn hearsay must be worthless indeed. And whoever speculates on worthless information is liable to get the worst of it.

As a rule farmers are a shrewd class of men. It is for their interest that people should believe that there is a scarcity rather than an abundance of grain. So when they give in their answers to questions as to the supply they, as a rule, do more or less of the Ananias business, which they think they have a perfect right to do, not being on oath and having a lawful purpose to carry out—namely, the furtherance of their own interests. Therefore, if a farmer has something like a thousand bushels of wheat in his bins he is liable to report 500, and satisfies his conscience in this way: "It looks as if there might be 1,000 bushels, but appearances are deceitful. At any rate, there are surely 500, and when I report 500 I don't assert that there may not be more, and anyhow I'm not on oath. Besides, before I get the grain to market the berry may shrink or the rats may get in, and so I'll say 500 and let it go at that."

This is one of the reasons why, when there is an attempt at a corner and the price of a cereal goes up, the stock keeps pouring in on the speculator, just as if a pint bottle, so called, were to give out a quart of the fluid. The hapless speculators who fancied they had the whole of the visible supply find that there exists an unknown invisible supply, which all at once takes on shape and becomes alarmingly visible, and insists on being bought and paid for at the highest prices. It is the unexpected that always happens; and if expected wheat has been contracted for and delivered at \$1 a bushel, along comes the unexpected wheat and clamors for \$1.10, or the market will be broken, and then where will the speculators be? The agony is always piled up on the speculators just at the end of the deal, when the rich profits seem to be about in sight. But this sort of sight is like the mirage on the plains of Arizona; you stagger along hungry and thirsty and a splendid lake with verdant shores seems to be about two miles distant, and when you have traveled those miles the view breaks and you are in the middle of heated sands, and the nearest water many miles away.

Let me say right here, whoever attempts to control any one of the great food products of the world, whether corn, wheat or rice, puts himself in the place of a man or set of men who should set out to dam the Niagara rapids with bulrushes. They lose their labor and are swept away besides.

The trade in futures or options has its headquarters in Chicago. Chicago is really the heart whose beats send the blood of commercial activity coursing through the arteries of trade all over the body of the great Northwest. When you go where the wheat is raised, and where a large part of it is, you find more business men than speculators.

The Board of Trade and speculators are not enemies of

the farmer; they raise prices as much and as often as they depress them; therefore, the average is undisturbed and I think I proved in the *North American Review* of October, 1891, that they are the chief means of his always having a ready market at the nearest shipping point for his grain, and even at his barn door if he doesn't want to haul his grain.

ELEVATOR RULES AND CHARGES.

Many country elevators, and some city elevators, that do a local business, have published rules and charges, but not as many as ought to have them. Every dealer that does a storage business should have rules and charges governing same printed and posted in his office. It is a custom, with many, to print rules and charges on the back of their business cards. This is a very good practice, and meets with no objections.

The Northern Central Railway Company has recently completed a 300,000-bushel elevator at Calvert Station, Baltimore, Md. On the back of the business cards of the elevator is the following:

RULES AND TARIFF OF CHARGES.

1. After grain has been inspected and graded by the Corn and Flour Exchange inspection rules, it will be stored with grain of like grade without regard to ownership. Special bins will only be assigned when it is convenient and under special agreement, and when there are good and sufficient reasons for so doing.

2. All grain stored will be at the owner's risk of loss from fire or heating, from the time it is received into the elevator until delivered therefrom.

3. Elevator certificates will be issued by the superintendent of the elevator, at his office, upon the payment of all freight and charges.

4. Grain will be delivered in quantities of not less than forty bushels, upon the payment of all charges and the surrender of the elevator certificate properly indorsed in ink by the party to whom issued, and also by the party surrendering the same.

5. When elevator certificates are surrendered, one order to deliver will cover as many teams as are then present, after which an order, properly signed, must accompany each team, except when two or more teams come together.

6. All grain, the storage for which expires on Sunday or a legal holiday, must be removed on the preceding day, otherwise extra storage will be charged.

7. All grain received will be subject to the above rules, and the conditions of the elevator certificate; and to the operations of all the provisions of the agreement between the Northern Central Railway Company, the Baltimore & Ohio Railroad Company, the Baltimore Elevator Company and the Baltimore Corn and Flour Exchange, dated March 27, 1882.

CHARGES.

Receiving, weighing, delivery to cars or wagons, and storage for first ten days, or portion thereof, one-half of one cent ($\frac{1}{2}$) per bushel, to be paid by the consignee; each succeeding ten days, or portion thereof, one-fourth of one cent ($\frac{1}{4}$) per bushel. Blowing, on delivery or in store, one-fourth of one cent ($\frac{1}{4}$) per bushel.

IRA DAY,
Superintendent.

Aug. 24, 1891.

PRACTICAL CONSIDERATIONS.

This country is full of grain this season, says the *Market Record*, and Europe is short of it even more, taking all crops, which will use up our surplus if not advanced too high. About a dozen years ago the situation was similar to this. Then speculation advanced prices too much, so that too large stocks were handed along from one year to the next, with no good result. Ocean freights, too, cut an important figure, for the eagerness of such carriers, like the eagerness of would-be farmer speculators and speculative dealers, pushes them over prudential lines, and they take out of the commodity they transport more than it will bear, until such rates, when added to the other exactions, lead to curtailment of consumption and increased production, with ultimate depression and collapse. All the talk about exhausted acreage and the new conditions being permanent, is too fanciful to bear the test of practical consideration.

The New York papers are engaged in misrepresenting the facts in regard to Baltimore's corn trade. They find the B. & O. Railroad making extensive preparations to move corn from the interior to the seaboard and have jumped to the conclusion that it is about to discriminate in rates in favor of Baltimore grain merchants. Of course there is not a word of truth in the allegation, but it appears to serve envious minds as the proper explanation for the wonderful development of the corn trade at this port for the last few years.—*Baltimore Morning Herald.*

Points and Figures.

The corn crop is estimated at 2,000,000,000 bushels.

Sioux City will build a corn palace in Chicago in 1893.

The corn crop of the New England states is estimated at 8,000,000.

The average yield of potatoes for this year is estimated at about 90 bushels per acre.

The United States Agricultural Department reports the area and production of flaxseed in 1891 as follows: Acreage, 1,927,293; crop in bushels, 15,455,272; in 1889, 10,250,410 bushels; in 1879, 7,170,951 bushels; in 1869, 1,730,444 bushels; in 1859, 566,867 bushels.

Our exports of breadstuffs for the month of September were valued at \$31,462,021, against \$7,199,348 for the same month in 1890. For the three months ending with September our exports were valued at \$76,694,822, against \$28,654,227 for the corresponding time of 1890.

The corn exports in September were 2,838,916 bushels, against 3,315,636 bushels in September, 1890. The exports in the three months ending with September were 7,097,342 bushels, valued at \$4,708,247, against 12,785,021 bushels, valued at \$6,186,733 in the same months of last year.

The exports of oats for September aggregated 322,692 bushels, against only 32,250 bushels for the preceding September. For the three months prior to October we exported 528,915 bushels, valued at \$218,253, against 646,415 bushels, valued at \$238,175 for the three months prior to October, 1890.

The exports of wheat during the month of September were 19,496,165 bushels, against only 2,006,676 bushels during that month last year. During the three months ending Sept. 30 we exported 50,414,889 bushels, valued at \$52,734,641, against 11,703,737, valued at \$10,721,299, during the three months ending Sept. 30, 1890.

Two acres of alfalfa and one of corn will grow twice as much pork as three acres of corn, and it will not cost the farmer one-half to grow two acres of alfalfa and one of corn. So you see you make both ways substituting alfalfa for two-thirds of the corn, and this will apply with equal force to the other stock.—*Texas Stock Journal.*

The quantities of contract grain in Chicago elevators at the close of business Saturday, Nov. 7, according to the official returns, were as follows: Wheat, 3,019,694 bushels; corn, 642,247 bushels, and oats, 395,363 bushels. On the week preceding the quantities were: Wheat, 2,611,588 bushels; corn, 1,010,561 bushels, and oats, 305,504 bushels.

A prominent Chicago dealer says there will be fully 25,000,000 bushels of oats from this crop sold for export. About 6,000,000 bushels has been sold for shipment before Feb. 1. If the sales reach 10,000,000 bushels for December and January shipment, considerable difficulty will undoubtedly be experienced in getting oats to fill contracts. The receipts must be greatly increased.

The enormous exports of wheat during the last few months are soon to be followed by heavy shipments of corn. On last Monday and Tuesday freight engagements were made at Baltimore for about 2,500,000 bushels of grain, mostly corn, to be shipped to the Continent. All indications point to the heaviest corn exports ever made from this country, and at good prices.—*Baltimore Record.*

A gentleman just returned from a trip through Manitoba on the Northern Pacific road says: "As far as the eye can see, the fields are dotted with wheat stacks, and though every available threshing machine is in operation, they have thus far made but little impression upon the amount of grain harvested. There are hundreds of acres of grain still in the shock that does not appear to be so badly injured by rain as has been reported. The stacks are in good condition.—*Market Record, Nov. 6.*

In his crop report of Nov. 7 Prime says: Texas, two months without rain; considerable wheat not sprouted; acreage much reduced. Tennessee, no rain for forty-five days of consequence; poor prospect. Kentucky, dry as powder; poorest prospect for years. Kansas, considerable wheat not up; some of the sprouted wheat died out; very poor prospect. Missouri, Illinois and Indiana, about the same conditions. Ohio, Northern fair; Central and Southern, bad outlook. Michigan, no rain of consequence in six weeks; poor outlook.

TEXAS GRAIN DEALERS ORGANIZE.

A number of grain dealers and millers met at Dallas, Tex., Oct. 28, and formed a permanent organization, which will be known as the State Grain Dealers' Association of Texas.

The purpose of the association is to bind the grain and flour interests of the state so closely together that they may work in harmony in matters relating to freight rates, more rapid transportation, standard grades and weights, and to mutual assistance in enlarging the grain and flour interests of the state. Toward obtaining these ends the members of the association are to settle all disputes in business before a committee of arbitration elected by the association, thus avoiding lawsuits and other incidents detrimental to trade. The association at present will have no power whatever over grain values, and no member is restricted in buying or selling when or where he pleases.

The following officers were elected, to serve a term of one year: S. F. McEnnis, Dallas, president; E. Early, Waco, vice president; J. P. Harrison, Sherman, treasurer; G. D. Harrison, McKinney, secretary; J. F. McEnnis, J. P. Harrison, E. Early, S. E. McAshan of Houston and C. F. Gribble of Sherman, directors.

WHAT CAUSED THE FAILURE OF THE CORN CROP OF 1890.

BY R. JAMES ABERNATHEY.

It is generally assumed that the short corn crop of 1890 was due to a shortage of rain during the growing season. The writer was a keen observer of events during the growing period of that season, watching closely meteorological developments, and felt assured that a fair crop of corn would be produced, and was therefore much surprised at the final result.

It could not all have been due to a deficiency of moisture, as I shall endeavor to show. The funny part of it is that out of twelve subdivisions into which the country is divided by the Signal Service Bureau, two only show an excess of moisture above normal in 1889, they being the New England and the Middle Atlantic states. All the other divisions show deficiencies, and yet the corn crop of 1889 was the largest ever grown. In 1890 six of the twelve showed deficiencies, while the remaining six showed excesses, and yet the corn crop of 1890 was the shortest since 1881. The Missouri Valley showed a marked deficiency, and the crops of Kansas and Nebraska were short. On the other hand the crop of Missouri was large, it never having been excelled but three times before in the history of the state. The Upper Mississippi Valley is reported deficient, but the crop of Minnesota was full, and Wisconsin the largest in ten years. Illinois shows a decline as compared with the previous year, but had a much larger crop and better yield than in 1887.

The Ohio Valley and Tennessee and the Lower Lake regions show a marked increase in moisture, and we find that Indiana had the smallest crop raised but once before in ten years, the crop of 1887 being smaller. The crop for 1890 was 89,000,000 bushels. In 1888 it was 125,000,000 bushels, and the acreage nearly identical in both years. In Ohio, which is in the same well-moistened territory, the crop was the smallest in over twenty years, with an average acreage. The crop of Kentucky was the shortest in ten years except once. The same is true of Tennessee. In the Middle Atlantic states there was a marked excess of moisture, and we find Pennsylvania's crop the shortest in eight years, while New York was in the same boat. The Western Gulf states show a marked increase in moisture, and Texas had the smallest crop in years.

A careful examination shows that—except in Kansas and Nebraska, where the corn was burnt up by hot winds; except along the Missouri River, where the crop was good—the well-watered districts were relatively as much behind with the corn crop as were any of the dryer sections. In fact, Indiana and Ohio show greater relative losses, when compared with full crops, than do the other sections. It is true that in the month of July there was a marked deficiency in the Lower Lake region and the Ohio Valley, but a full average in August. But the observations of the writer denote that August rains will always make corn, where it has not been burnt up by hot winds in July. In fact, I have seen it nearly scorched out in July, and good rains the latter part of that month and during August made a good crop. That was notably

true of observations made in Kansas not far from the Missouri River in the summer of 1890. I watched fields of corn that were being cooked day by day with hot, dry weather up to the middle of July, and would not have given 50 cents per acre for it on a speculation, and yet afterward the same fields made the best crop ever grown. Late July and August rains did it. I have just learned that the same fields are not near so good this year.

Now, if there had been a great excess of temperature in the Lower Lake and Ohio Valley regions during July that might in part have accounted for the shortage there; but I find the temperature about normal. There was an excess of temperature in June, but the moisture was about normal. In the Middle Atlantic states there was no deficiency in moisture during the season, except in June, and no great excess in temperature at any time, and, just as stated, both Pennsylvania and New York had short crops, when both ought to have had large crops if warm weather and plenty of moisture make's corn. Short corn crops in dry sections and short crops in moist sections, all in the same year, puts a curious face on the situation, and would seem to indicate that there were other reasons for the shortage of last year.

CANADA'S EXPORT BARLEY TRADE.

The complete official returns of the export of barley from Canada for the year ended June 30 last have been issued. They show that during the year 4,892,327 bushels was exported from Canada as compared with 9,975,906 bushels in 1890. In detail the exports in 1891 were 4,751,952 bushels to the United States, 132,650 bushels to Great Britain, and 7,714 bushels to Newfoundland. In 1890 Canada exported 9,939,745 bushels to the United States, 27,131 bushels to England, and 8,973 bushels to Newfoundland. This decrease of 50 per cent. in one year in such a valuable export trade is, to say the least, discouraging to those who at considerable expense and enterprise built up a paying business in the barley export trade with the United States. The efforts to make up for the loss of this trade by working up a trade in barley with Great Britain have not met with very encouraging success. The exports of Canada barley and the value thereof for the past eleven years were as follows:

	Bushels.	Value.
1881.....	8,800,579	\$ 6,260,183
1882.....	11,588,446	10,114,623
1883.....	8,817,210	6,293,235
1884.....	7,780,262	5,104,642
1885.....	9,067,395	5,503,833
1886.....	8,554,302	5,724,693
1887.....	9,455,964	5,257,889
1888.....	9,370,158	6,494,416
1889.....	9,948,207	6,464,539
1890.....	9,975,908	4,600,409
1891.....	4,892,327	.....

Queries and Replies.

Questions and answers are inserted under this head free of charge and all are invited to avail themselves of this column.

No. 16. Handle Damaged Grain.—In reply to "Wisconsin" asking in Query No. 14 of the AMERICAN ELEVATOR AND GRAIN TRADE, for the address of a Western dealer in damaged grain, would say we will handle it for him.—J. W. ELLSWORTH & SON, 20 South street, New York.

No. 17. Belt Transmission.—Will some reader of the AMERICAN ELEVATOR AND GRAIN TRADE please tell me what to do to keep a rubber belt from slipping. The belt is twelve inches wide, five ply and of the best quality. The engine pulley is five feet in diameter and the one on the line shaft four feet in diameter, twenty-two feet apart. I now have to use a tightener.—J. I. C.

No. 18. Address of Elevator Builders.—I would like very much to have a list containing the names of some of the best elevator contractors and architects. If you can do so without much trouble will you kindly give me the information?—JNO. A. GRANT, General Manager Texas & Pacific Railway Co., Dallas, Tex. [The best elevator architects and contractors have cards in our advertising columns.—Ed.]

RUSSIAN GRAIN ELEVATORS.

In a recent report a British consul, in writing of grain elevators in Russia, says: It is necessary to state that these now exist at St. Petersburg, Eletz, and that the South-western and Riazan Kozloff Railway Companies have obtained the necessary sanction for erecting such elevators at their stations, one of them to be established at Odessa. It is expected that the construction of fourteen elevators will have been finished by the coming autumn.

The elevator at Eletz, in the province of Orel, received during 1889 about 600,000 pounds (9,508 tons) of grain for storage, and about 75,000 pounds (1,100 tons) of the same were disposed of by it in other ways. The immediate effect, so far as the establishment of elevators in Russia is concerned, has proved advantageous to grain growers and dealers, who are now able to obtain advances of money on easier and more favorable terms to themselves than heretofore. It also enables them to regulate their sales more in accordance with the demand for grain at the ports and in foreign markets. There still exists a considerable amount of prejudice on the part of certain native grain dealers against the use of the elevator. They cannot yet reconcile themselves to the idea of the loss they are convinced they would sustain by the removal of the dross from their grain.

So valuable is such dross considered by some of these dealers that they display considerable eagerness in some places in its purchase at the elevators, doubtless for judicious blending with their own uncleansed and unassorted grain stocks.

By such fraudulent practice the dealers in question to a certain extent counteract the efforts made by the Government to place the grain trade on a sound and an honest basis.

It would seem desirable to prohibit the sale of this dross at the elevators, by which means a check would be placed on some of the nefarious practices so rife in the Russian grain trade, and which form the subject of loud complaints in the grain markets of Western Europe.

GRAIN STEALING AT MONTREAL.

There can be no question that grain stealing has been carried on to a much greater extent than many people had the slightest conception of, and the agitation of the question of shortages, which has been harassing our merchants for years past, has not been without its good results, as we are informed by some of our grain dealers that since the *Trade Bulletin* commenced to agitate the question of shortages and urged the authorities to put a stop to the wholesale stealing that has unquestionably been going on for years, to their serious disadvantage, they have been agreeably surprised to find that the deliveries of their grain by the railway companies have begun to run over the weight called for by the freight bills, in place of the frequent shortages that had previously been a source of constant complaint. This has confirmed the suspicions of our merchants that thieving had been going on among the railway men as well as the barge and elevating men. It is stated that shippers as a rule are in the habit of putting a little over the weight called for on bills of lading when loading cars, in order to insure full weight at destination, and now it appears they are getting the full amount of the grain sent. This goes to prove how general the system of grain stealing has been. It is asserted upon pretty good authority that working men, who for years past have been employed in the handling of grain, whose wages only amount to \$360 to \$400 per season, are well off and the owners of property.—*Trade Bulletin*.

Exports of rye in September aggregated 3,161,537 bushels, against the infinitesimal quantity of 16 bushels in September last year. In the three months ending Sept. 30 we exported 4,269,936 bushels, valued at \$3,956,784, against 260,289 bushels, valued at \$158,061 in the corresponding period of 1890.

The Chicago *Herald*, Oct. 22, says: "It was learned positively yesterday that Gill & Fisher, the Baltimore grain men, had already contracted for 750,000 bushels of grain at Kansas City alone. This total of 1,500 cars is to be delivered in Baltimore before Jan. 1. Nothing more sensational in railroad circles could happen than that the old deal of Gill & Fisher with the Baltimore & Ohio should be resurrected. It is taken that such is the case by Eastern railroad men from the fact that the firm is apparently in the market for unlimited quantities of corn.

Trade Notes.

Store is vacant,
Sign "To Let,"
Former tenant
Had to get.
He, in sorrow,
Sits and sighs,
'Cause he didn't
Advertise.

—N. Y. Journal.

H. N. Cook, dealer in leather belting at San Francisco, is dead.

Kellogg & McCauley, manufacturers of leather belting at Chicago, suffered loss by fire recently.

The merchant who does not advertise in his trade journal is rarely unfortunate—his creditors attend to that.—*Har Review*.

The Diamond Feed Mill Manufacturing Company of Owatonna, Minn., has been succeeded by the Diamond Grinding Mill Company.

D. A. Robinson of Simpson & Robinson, elevator builders of Minneapolis, Minn., has been granted a patent on a patent for power transmission in grain elevators.

Trip-hammer advertising is the kind that creates industries that make us marvel at their magnitude. How long would it take to shape the hot iron if a stroke was given this week and another six months hence? Constant pounding is what does the business.—*W. F. Cook*.

J. L. & H. W. High, manufacturers of the combined engine and boiler and electric motors at 123 North Third street, Philadelphia, after inserting the advertisement in the AMERICAN ELEVATOR AND GRAIN TRADE once, write as follows: "We received your journal on Monday and yesterday (Tuesday) we received an inquiry for engine from an elevator man."

Eighteen large water wheels were recently ordered of James Leffel & Co., Springfield, O., builders of the famous James Leffel Water Wheel, by one firm. The turbines of this large order are to be used for driving a fine wood pulp mill, now under contract for construction in Wisconsin. This mill is situated near large quantities of suitable timber, and where water power can be obtained.

Nothing is more deceptive than the public memory. It is a slate on which the wet sponge goes as often as the pencil, and what to-day is a figure to-morrow may be a blank. This is the material on which advertising has to act, and the science of handling it rightly is really the secret of successful advertising. It is a matter of both common sense and experience that in advertising and making business, as in fixing a lath or hanging a picture, it is as much a question of the hammer as the nail. Business success is not obtained by patent, but by patient and persistent effort, in which advertising counts as an indispensable factor.—*Pittsburg Budget*.

The Cincinnati Corrugating Company of Piqua, O., is making additions to its tin plate plant as follows: one pair cold rolls from A. Garrison & Co., Pittsburg; six annealing boxes from McKeesport (Pa.) Machine Company; four Morewood Tinning Pots; one five roll Morewood Tinning Machine; one pump for liquid tin; complete kits of tinman's and washman's tools; necessary shafting and pulleys; also fire and red brick, cement, lime, castings, bolts, etc., to erect a complete tinning "stack." All the additions to the tin plant will be completed in four to six weeks, and the Corrugating Company will then have increased facilities for making either bright orterne tin plates of highest grades. The steel sheets will be rolled as heretofore by the Piqua Rolling Mill Company.

Mr. A. M. Morse, until recently of the firm of English, Morse & Co., Kansas City, Mo., has removed to St. Louis, Mo., with offices in the Commercial Building, corner Sixth and Olive streets. During the eight years that Mr. Morse has been located in Kansas City he has gained a wide and favorable acquaintance among the steam users of the Southwest, and has designed and furnished a liberal proportion of the representative steam power plants in that section for elevators, electric lighting, electric railways, flour mills and manufacturing purposes. The business in the future will be conducted under the style of A. M. Morse & Co., who will represent leading manufacturers of high grade steam engines of both Corliss and high speed types, also improved boilers, steam pumps and other specialties which go to make up complete steam power plants. They will offer only the best class of machinery at manufacturer's

prices and will make a specialty of designing and furnishing complete steam power outfits for any service, also the improvement and extension of plants already established.

The Jeffrey Manufacturing Company of Columbus, O., report business as good in their different lines of specialties. They have many orders on their books for elevators and conveyors, for handling material in bulk or package; and have recently purchased a tract of land adjoining their present extensive works, on which they have erected a large and substantial brick building, that they may be better able to take care of their growing business.

The engine department of the Racine Hardware Manufacturing Company of Racine, Wis., is being kept very busy on both steam and gas engines. Recent shipments of automatic high speed engines include orders from Butte City, Mont., Bonham, Tex., Stearns, Mich., Peoria, Ill., Terre Haute, Ind., Middleton, O., St. Louis, Mo., Detroit, Chicago, Houston, Tex., Springfield, Mo., Milwaukee, Wis., etc., etc. The company has closed a contract with the Edison General Electric Company for one 10x10 engine, together with a 54x12 flange steel boiler, pump and heater; all to be set up and connected at the Veteran Soldiers' Home at Waupaca, Wis. This makes the second order placed with the Racine Hardware Manufacturing Company for one of its engines this fall.

LATE PATENTS

Issued on October 13, 1891.

BALING PRESS.—John H. Pickett, Annapolis, Ind. (No model.) No. 461,044. Serial No. 373,457. Filed Dec. 3, 1890.

BALING PRESS.—Alfred H. Brickey, Damascus, Ark. (No model.) No. 461,157. Serial No. 384,890. Filed March 13, 1891.

GRAIN METER.—Hale E. Hawk, Bucyrus, O., assignor of one half to Memin J. Monnette, same place. (No model.) No. 461,385. Serial No. 377,702. Filed Jan. 14, 1891.

GRAIN METER.—Hale E. Hawk, Bucyrus, O. (No model.) No. 461,335. Serial No. 351,177. Filed May 9, 1890.

GRAIN METER.—Hale E. Hawk, Bucyrus, O. (No model.) No. 461,336. Serial No. 366,744. Filed Oct. 1, 1890.

Issued on October 20, 1891.

HAY PRESS.—Oren B. Pancoast, Valmont, Colo. (No model.) No. 461,768. Serial No. 390,297. Filed April 24, 1891.

HORSE POWER PRESS.—William B. Willis, Waco, Tex., assignor of one-half to John F. Kelley, same place. (No model.) No. 461,463. Serial No. 357,881. Filed July 5, 1890.

Issued on October 27, 1891.

GRAIN METER.—John Henry, Ardoch, N. D. (No model.) No. 462,006. Serial No. 377,117. Filed Jan. 8, 1891.

CORN SHELLER.—Frank H. Barnett, Hubbard, Neb. (No model.) No. 462,108. Serial No. 390,946. Filed April 29, 1891.

HAY PRESS.—E. Manuel Turner, Wilmington, O. (No model.) No. 462,180. Serial No. 391,185. Filed May 1, 1891.

Issued on November 3, 1891.

ROTATING GRAIN MEASURER.—John W. Kershaw, Jr., Burnside, Ia. (No model.) No. 462,560. Serial No. 387,360. Filed April 2, 1891.

PNEUMATIC GRAIN CONVEYOR.—Frederic E. Duckham, London, Eng. (No model.) No. 462,539. Serial No. 384,013. Filed March 6, 1891.

POWER PRESS.—Fred Grotenrath, Milwaukee, Wis. (No model.) No. 462,485. Serial No. 386,006. Filed March 23, 1891.

REISSUE.

MACHINE FOR HULLING OATS OR COTTON-SEED.—Martin W. Leonhardt, St. Louis, Mo., assignor of one-half to George J. Fritz, same place. (No model.) No. 11,200. Serial No. 356,587. Filed June 24, 1890. Original No. 425,331, dated April 8, 1890.

The corn crop of the seven surplus states is as follows: Iowa 300,000,000 bushels, Illinois 240,000,000, Missouri 195,000,000, Kansas 160,000,000, Nebraska 135,000,000, Indiana 125,000,000, and Ohio 105,000,000 bushels.

VALUABLE BOOKS FOR GRAIN DEALERS.

The following standard works will be sent, postage paid, on receipt of prices given:

ROBINSON'S TELEGRAPH CIPHER.—The publishers have recently revised this excellent work, and we are now prepared to supply the trade. Cloth binding, \$1.50; leather.....\$2.00

CLARK'S VEST-POCKET GRAIN TABLES.—A very useful and handy little book for grain buyers; to be used in reducing to bushels any quantity of grain or seeds up to 100,000 bushels. Size 2½ by 8½ inches, 16 pages, Leatherette, 75 cents. Leather binding.....\$1.00

GRAIN DEALERS' AND SHIPPERS' GAZETTEER.—A new publication containing the grain inspection rules for the states of Illinois, Wisconsin, Minnesota, Michigan, Ohio and Missouri, and a complete list of the names of grain dealers and shippers on twenty-five railroads which penetrate the principal grain growing territory of the country. The names were collected recently by the aid of the railroad companies, so the names of no retired firms are given, making it reliable and by far the best book of the kind published. It is well bound and contains 370 pages. Price.....\$5.00

THE MARKET REPORTER.—This neat little book is just the right size to fit your vest pocket. It is published every three months, and contains much information that you need every day in the grain business. It contains the highest and lowest price for grain and provisions each year for twenty-eight years on the Chicago Board of Trade, also the opening, closing, highest and lowest prices by months for the six months preceding. It also contains much miscellaneous information about elevators, inspection, exports and crops that is of value to grain dealers. The stock exchange markets are given and a business diary for three months. Price.....50c.

CLARK'S GRAIN TABLES.—This work is published in several different forms, for use in different lines of business. In these tables pounds are reduced to bushels, so that a buyer can quickly determine the correct number of bushels in a load without doing any figuring. Their use effects a saving every day of more than time enough to pay for them. The edition intended principally for reducing team scale weights to bushels contains nine tables, and is bound in paper. Price 50 cents. This will be found invaluable to country buyers. A new edition, intended for shippers and commission merchants, reduces any quantity up to 64,000 pounds to bushels. It contains sixteen tables, and is neatly bound in leatherette. Price.....\$1.50

CLARK'S DECIMAL GRAIN VALUES.—A series of tables for instantly finding the cost of any number of pounds at any possible market value per bushel, also reducing pounds to bushels on the same page. It is the design of this work to show at a glance, or with the simplest calculation, the cost of any quantity of grain. The method adopted is the result of careful study and is a novel and original combination of decimals in type of differing faces, by which the great number of calculations necessarily involved are presented in a clear, concise and comprehensive manner. Values are shown directly from pounds, without reducing to bushels, while for convenience, where it is necessary or desirable to indicate the quantity by measure, the equivalent bushels and pounds are shown upon each page. The range of prices covered by the tables is for oats 10 to 70 cents per bushel; for corn, rye and flaxseed 10 to \$1.10; for wheat 30 to \$1.50, and for barley 20 to \$1.50. The book contains 90 pages, is well printed, and bound in half morocco. Price \$7.50; extra quality paper and binding.....\$10.00

For any of the above, address

MITCHELL Bros. Co., 184 and 186 Dearborn street, Chicago, Ill.

Exports of barley during September were 195,484 bushels, against 24,144 bushels during the preceding September. For the three months ending with September the exports were 490,650 bushels, valued at \$315,440, against 110,264 bushels, valued at \$71,497 for the same three months of 1890.

The Lake Shore Railway Company have made a rate of winter storage on a limited quantity of grain of 2½ cents per bushel from Dec. 1 to April 15. The Wabash and C. H. & D. Elevators have made the above rate without limit, and the Wabash also makes a rate from Oct. 1 to April 15 of 3 cents.—*Toledo Market Report*.

GRADING CORN AT CHICAGO.

Editor American Elevator and Grain Trade:—I am in receipt of your inquiry in regard to the effect the amended corn rules will have upon the quantity of contract corn made by this department.

The new rule was not intended to (and will not) make the least change in the amount of corn passing into the contract grades. Any corn that graded contract last year will so grade this year.

Corn that is dry enough for No. 2 is expressly excluded from the operation of the rule. The practical working of the rule will be as follows:

All old corn will be graded just as it has always been unless mixed with new corn.

All corn of the new crop that is of proper quality, will grade No. 2, or better if dry; new No. 2 if slightly soft. If corn of the new crop shall be reasonably dry and reasonably clean, but not sound enough for No. 2, it will be graded new No. 3. Corn of the new crop that is badly damaged, damp, or very dirty will be graded new No. 4.

In a word, the effect of the new rule is to separate the new from the old crop in all grades below No. 2.

Respectfully,
P. BIRD PRICE,
Chief Inspector.

SCREENINGS.

To shock grain—crush it.

A great corn scenter—the cow.

Nebraska acknowledges the corn.

Every elevator man has his weighs.

The story of the grain markets is a cereal.

The weeds in Kansas are full of corn this year.

The pale horse of death is fond of "wild oats."

Wheat is not the natural food of bears anyway.

The thought of a rice trust naturally goes against the grain.—*Chicago Times*.

Wheat is going up in Nebraska—up into the elevators, out of reach of the bears.

"I am closing out my entire stock," said the farmer as he fenced in his corn field.

The rise of rye in Europe does not help the Bourbon element.—*New Orleans Picayune*.

"There," said the farmer as he waved his hand over the cornfield, "is my stalk in trade."

"Hear about Chappie?" "No." "Got tossed by a bull on Wall street." "Hur?" "Broke."

Wheat has taken an upward jump. That would be expected of spring wheat.—*Lowell Courier*.

Corn in the field is shocked, and when it is made into whisky it is shocking.—*Binghamton Republican*.

Corn is well provided with ears, but its talk doesn't amount to much, it's too husky.—*Lowell Courier*.

It is not the nights that keep Kansans awake nowadays, but the rustling of the growing corn.—*Athens Champion*.

It is reported that several chiropodists have applied for space in the World's Fair corn palace.—*Syracuse Herald*.

"If wheat has ears, to what do you suppose it listens?" "I don't know, unless it is to the cornstalk"—*Baltimore American*.

It is a curious fact that Prof. Failyer of the Kansas Agricultural College, makes a success of everything he undertakes.

A Cereous Misunderstanding.—"How's your wheat?" "Intend to before long." "Intend to what?" "House my wheat."

One of the most bullish grain crop estimates that has come from Europe this season was written by a man named Bear.

Broker S. V. White and the members of the Bichloride of Gold Club are agreed that corn possesses many dangerous qualities.

Joseph Walker of Massachusetts invented wooden shoepegs in 1818, but it was a Connecticut man who first sold them for oats.

The Eastern grain dealers may have claimed intimate knowledge of our corn-growing ways, but perhaps they will now be able to call to mind the anecdote of the politician who, wishing to ingratiate himself with grangers who had votes, announced that he himself had been born

between two rows of corn, and got for his patronage the retort "A pumpkin, b'gosh!"

Pete Ackley has took a sudden notion that he must "raise the wind," and in consequence is marketing his oats.—*Rural Notes*.

A Kansas editor has put the precautionary sign on his door, "No ears of corn less than sixteen inches in length will be noticed."

The Amsterdam grain market was greatly excited Saturday. The same thing frequently occurs in this country without the first two syllables.

A 13-year-old Ohio boy was smothered to death by wheat the other day. His parents have many sympathizers on the Chicago Board of Trade.

Many Board of Trade men are "getting it in the neck," as it were, in the corn and wheat deals. Their cereals, it may be stated, are "continued in their necks."

Out of the conflicting statements concerning the season's crops, the only thing certain is that the hair crop generally tends to shortness.—*Philadelphia Times*.

Queen Victoria has a private wire running from Balmoral Castle to London. As she is not a member of the Chicago Board of Trade, it will not be interfered with.

Mr. Stayer—"Have you any opinion on the wheat or stock market?" Mr. Shorthorn Bull—"I have an opinion—a decided opinion—that is just about all I have left."—*Puck*.

An Austin cow is the proud yet puzzled mother of a young animal that seems to be half calf and half bear. She ought to start a Board of Trade with it.—*Chicago Tribune*.

A correspondent wants to know the meaning of ukase. Well, it seems to be something to lift the price of American breadstuffs. It is likewise Russian for an imperial edict.—*Boston Herald*.

Minnesota paid out \$52,000 for wolf-scalps last year without getting the scalps of the speculators who are trying to rob the farmers with "Hold Your Wheat" circulars.—*Chicago Times*.

B. P. Hutchinson, formerly of Chicago, has bought a membership in the New York Produce Exchange. This will compensate us for the loss of the World's Fair.—*New York Financial News*.

Fannie—"Father, Mr. Bond proposed to me last night." Father—"What is his business?" Fannie—"He's a broker." Father—"What kind of a broker?" Fannie—"He's a dead broker."—*Continent*.

"Is it farmin' Dennis O'Maley is goin' ter try?" said a laboring man. "It is that same." "Why," rejoined the other scornfully, "he don't know enough about farrumming to plant his feet in the road and raise dust."

"The most expensive meal I ever ate cost me \$157,000." "Why—how the—" "I had just cleared that amount on a wheat deal, and was just cashing the check when the girl woke me for breakfast.—*Indianapolis Journal*.

A wonderful story comes from Wilmington, Cal., to the effect that a procession of countless millions of toads passed through that place a few weeks ago. If it be true there is nothing wrong with the hop crop of California.—*Chicago Tribune*.

Tears, idle tears, suffuse the cheeks of Deacon S. V. White of New York every time he looks at a corn dodger, and the cry of little ones playing "Pussy wants a corner" gives him that tired feeling which is a part of the misery of those who have had experience.

It has been suggested that with the success of rain-making, and with rain makers all over the country, there would shortly be a demand for some plan to stop the raining. No reports have yet reached us that crops were damaged by heavy rains in September.

"Pretty tough state you live in, isn't it? Met a man to-day who said he had traveled all through it and never saw so much as a stack of hay or a good corn field. Crops failing?" Kansas (warmly)—"He's a liar!" The jester—"Oh, no, he isn't; he's a blind man."—*Denver Republican*.

Iowa corn has been making a political and horticultural record this season that justifies some tall stories. But it hardly warrants the following, which a recent arrival from the West brought from him: "I saw," says the recent arrival, "a man standing at the foot of a cornstalk." "How big is your corn," I asked the farmer. "I don't know," was the reply. "I just sent one of my boys up to see, and I'm worried to death about him." "Can't

he get back?" "No; that's the trouble. The cornstalk's growin' up faster'n he kin climb down."

When S. V. White was in Congress he astonished and disgusted many of his co-members by having a private wire run into the cloakroom. They were afraid that if he were not frowned down he would soon have had a grain elevator and a stock board in operation under the shadow of the goddess of liberty.

A rusty appearing farmer drifted into a broker's office not long since, and, approaching the manager, said that he wished to make an investment, and that he wanted to buy something good. "How does silver strike you?" queried the broker. "Too gol darn high," said the farmer. "Well," said the broker, "if you want something cheap buy lead." "I don't think lead's eny good," replied the farmer. "Have ye some good tin?" he continued. "No; tin was busted some months ago. Why don't you try Consolidated Gas?" continued the broker. "Consolidated Gas?" exclaimed the farmer, "I've hern tell on pails made of papers (I spoze they use old ones they kin buy cheap), but I'll be dingd if they air now makin' on 'em of gas." "What do you want in here anyhow?" roared the broker. "I came in to buy some milk pails," replied the farmer. "A feller down here says as how this was a bucket-shop."

FLAXSEED AT CHICAGO.

The inspected receipts and shipments of flaxseed at Chicago during the past ten months according to the report of Chief Flax Inspector Stevens were as follows:

	RECEIPTS.		SHIPMENTS.	
	1891.	1890.	1891.	1890.
January.....	264,000	164,500	199,030	157,698
February.....	172,700	122,500	231,913	84,462
March.....	265,650	93,000	451,215	131,890
April.....	396,550	93,000	599,309	158,957
May.....	328,350	69,500	463,559	121,587
June.....	414,150	48,500	483,208	59,818
July.....	315,150	129,500	556,500	57,574
August.....	574,200	1,056,500	401,680	520,380
September.....	2,728,000	1,999,000	1,491,711	959,790
October.....	2,891,900	1,821,000	2,520,724	1,315,469
Total.....	8,350,650	5,597,000	7,898,922	3,567,625

A PLACE TO BE WATCHED.

Uncle Reuben (from Posey county)—Thar, look at that! Size it up keerfully that you kin tell one next time y' run across it. What is it? That's a bucket-shop, my



sou, a bucket-shop—one of them darned gamblin' places where they scoop in so many rich men and rob 'em of all they've got afore they git out ag'in. There goes one of the blamed little rascals now, buckets and all! Watch 'em, Willyum!

Not long ago Jay Gould threatened to divert grain shipments from Chicago to New Orleans. The attempt at such a diversion of trade is by no means new. It was made with great determination soon after the war. Nor did it fail because the grain had to go to New Orleans by river. It was found that in going through the warm water below the Crescent City and above the jetties the grain was liable to be heated and injured. Cotton does not suffer any injury, but grain might, and as a consequence Mr. Gould's threat is an empty scare.—*Chicago Inter Ocean*.

DOTS AND DASHES.

From Sept. 1 to Nov. 8 Toledo received 32,760 bags of clover seed, and shipped 8,710 bags.

The Indiana agricultural report says absence of rain has damaged the crops 33 $\frac{1}{3}$ per cent.

Peavey & Co., grain merchants of Minneapolis, are said to be contemplating the purchase of 500 grain cars for their own use.

Stocks of wheat in all call board warehouses of California Nov. 1 aggregated 229,000 tons, an increase of 600 tons during the month. Stocks Nov. 1, 1890, aggregated 165,000 tons.

As heretofore, all cars loaded with bulk corn or wheat arriving at Baltimore on the Northern Central Railway will be sent to the elevators at Canton unless specially ordered in writing through the proper agent to the new Elevator No. 2 or elsewhere.

Rain making in Texas is a failure according to recent reports from a trustworthy source. It has rained there since the experimenters began to touch off their explosives, but the connection between the explosions and the rain has not been satisfactorily traced.

The Chicago, Burlington & Quincy Railway Company issued an order Nov. 12, to all stations on its line to receive no more grain billed for Chicago, owing to the number of cars "held out" in the yards at Chicago. It is also rumored that the Chicago, Milwaukee & St. Paul Company has issued a similar order.

The Edgemore Land Syndicate, best known as the barley syndicate of Chicago, has succeeded in securing 250,000 acres of land in North Dakota, on which it is proposed to place German farmers to raise barley for malt purposes. These lands have been purchased in Nelson, Norman, Townner, Ramsey, Steele and Bottineau counties. The emigrants will not be tenants, but owners of the land, it being sold to them on easy terms. The crops will be bought by the company and shipped to all points where there is a demand for barley for brewing purposes.

Mr. D. G. Thomson, the manager of the Montreal Transportation Company, recognizing the force of the axiom laid down by the AMERICAN ELEVATOR AND GRAIN TRADE, namely, "to secure justice it is often necessary to demand it," asked Judge Dugas, before whom the men were arraigned [for stealing grain] for an exemplary sentence, in order to put a stop to robberies which it was well known had been going on for a long time previous, and the men were sentenced to six and three months' imprisonment respectively.—*Montreal Trade Bulletin*.

The following changes in the quantities in the official visible supply occurred during the week ending Nov. 7, according to the report of the secretary of the Chicago Board of Trade: Wheat increased 2,709,852 bushels, compared with an increase of 1,463,960 bushels in the corresponding week of 1890. Corn decreased 160,663 bushels, compared with a decrease of 632,456 bushels last year, and oats increased 113,864 bushels. The total stocks in the official visible supply are now as follows: Wheat, 33,941,968 bushels; corn, 2,811,505 bushels; oats, 4,332,412 bushels. Chicago stocks are: Wheat, 5,822,721 bushels; corn, 832,401 bushels; oats, 983,735 bushels.

The Neely Elevator at Chicago has been fitted with a new A. P. Dickey Grain Cleaner.

P. K. Jagger has put in one of the A. P. Dickey Manufacturing Company's Cleaners in his house at Disco, Ill.

O. N. Unthank at Arlington, Neb., is putting in the A. P. Dickey Manufacturing Company's Overblast Machine.

J. & L. Fallein at Stratford, Ia., have adopted the Dickey Manufacturing Company's Warehouse End Shake Mill.

Out at Norfolk, Neb., they are putting in a Dickey Manufacturing Company's Dustless Grain Machine in the new elevator.

McCommon & Williams are putting in their house at Mound City, Mo., one of the Dickey Manufacturing Company's machines.

The Howland Mercantile Company is putting in another of the A. P. Dickey Company's Grain Cleaners, this time at Glenville, Minn.

O'Neil Bros. are putting in a new machine for cleaning grain at their Axtell, Kan., house of the A. P. Dickey Manufacturing Company's make.

MINNEAPOLIS GRAIN CLEARINGS.

Following are grain clearings of the Chamber of Commerce Clearing House Association from the beginning, Oct. 14, to date, says the *Market Record* of Oct. 20, Wednesday, 8,250,000 bushels, Thursday 6,220,000 bushels, Friday 6,130,000 bushels, Saturday 6,440,000 bushels, Monday they were 6,900,000 bushels. The first day's work shows higher than the other days of the week immediately following, as there were some trades from preceding business turned into the association. Since that day they represent only one day's business. This trading has grown up in the last two years and is chiefly based on sales against country purchases, on the one side, and purchases against flour sales on the other. There is more or less of speculation outside of these two lines.

Before beginning of trading in future months here, all of the protection purchases and sales had to be sent away, some to New York, more to Chicago, while some went to Duluth. As it is now, considerable goes to each of the places mentioned, while some of them send orders here in return. Few people, even in this city, have any idea of the amount of grain bought and sold here for future months' delivery. Few outside of the Chamber of Commerce even know anything of it.

Before this business was organized the trading was all in outside places. It had to be done somewhere, for no elevator company would dare to pile up millions of bushels of wheat in country houses, or terminal houses even, unprotected by sales for forward months. They would find it difficult to maintain a standing in financial circles without such provision for safety against possible changes in values. The business done in grain for forward months has a strengthening influence upon the prices paid for grain in the country, as it removes risk and allows buyers at country stations to figure up closely, not having to provide for what would otherwise be a fruitful source of loss. It is not a mistake to say that half the old time margin, at least, has been wiped out since the change in methods. In the old days when wheat was bought along the Mississippi, to be taken away by river in the spring, there were no protecting sales, for they sometimes bought on a clear margin of 25 cents a bushel. Now 3 cents is wide and 5 cents an enormity that would scarcely be endured.

THE APPARITION IN THE ELEVATOR.

Some years ago a young man came to Chicago from Germany. His father had cut him off from his annuity. He lived in the same house where I lived. He finally obtained a place in one of the big grain elevators here. I do not know what the place was, except that he had something to do on the top floor, away up under the roof. Several men were employed with him in the same place. One day while he was dusting he suddenly stopped and asked his assistants who that nicely dressed old man was that was standing back there by the shaft. Strangers are never allowed in these big elevators, and to see one there, well dressed, was enough to excite comment. His companions looked in the direction indicated, and said they saw no one. He insisted, and when they laughed at him he went to the place where he saw the figure standing. On his approach it vanished. The young man fainted. He recovered and then asked his companions to make a note of the occurrence, the date and the time of day. He said the figure he saw was that of his father. In twelve days he received a letter from the old country telling him of his father's death. The date and time agreed with the date and time of the occurrence I have described. The letter informed him that his father had forgiven him, and remembered him in his will. He returned to the fatherland, got his portion of the estate, and is living there now. You may say what you please, but I have never felt like scoffing at a spiritualist from the time I heard this story. The spirit of that boy's father appeared to him on the top floor of that elevator.

A Kansas paper says that a farmer living a few miles south of Hutchinson had a crew of threshers at his place, one of whom had a bottle of whisky in his pocket. By some mishap it slipped from its hiding place and was run through the machine and the oats dumped into the bin before the accident was discovered. It spoiled 750 bushels of oats, making them fit for seed only.

Fires, Casualties, Etc.

A malt house at Cleveland, O., was burned Oct. 31. Loss \$100,000.

Higgins & Tucker's elevator at Ashton, Neb., was burned recently.

Charles Lohse, dealer in grain and feed at Chicago, lost \$200 by fire Oct. 31.

The Midland Elevator Company's plant at Edgerton, Kan., was burned recently.

More than 50,000 tons of hay on the marshes at Mazomanie, Wis., were burned Oct. 24.

The Clifton Springs Distillery at Cumminsville, O., was burned Oct. 27. Loss \$40,000.

A prairie fire destroyed sixty acres of corn and thirty tons of hay near Independence, Mo., Oct. 30.

McCaren & Co., proprietors of an elevator and general store at Carsonville, Mich., suffered loss by fire recently.

Henry Kunze's malt house at St. Louis, Mo., was burned Nov. 2 with 30,000 bushels of malt. Loss \$36,000; insured.

A. B. Knox's elevator at Disco, Ill., was burned Oct. 20, together with 5,000 bushels of wheat and 4,000 bushels oats. Insured.

Joseph Schneider's brewery at Highland Park, opposite New Brunswick, N. Y., was burned Oct. 20. Loss \$80,000; insurance \$27,000.

An elevator at Nora Springs, Ia., owned by Knapp & Wheeler, was burned Oct. 25, together with a large quantity of grain. Partly insured.

J. J. Adams' elevator at Garretson, S. D., was burned at six o'clock A. M. Oct. 17. Loss \$15,000; insured. The fire started in the engine room.

Daniel Dickdoff, an employe of the Winona Elevator Company at Winona, Minn., was caught by the rope of a car puller Oct. 7 and fatally injured.

The elevator and flour mill of McMannes & Arnold at Findlay, O., were burned at night Nov. 10, with 15,000 bushels grain. Loss \$40,000; insurance \$11,000.

Peter Ring, the employe of the Union Elevator Company at Minneapolis, Minn., who was injured by a freight car Oct. 10, died two days later, leaving a wife and child.

The elevator of E. T. Archibald & Co. at Castle Rock, Minn., leased by B. F. Miller and T. Clute, was burned Oct. 21, together with 12,600 bushels of grain. Loss on building \$4,000; insurance \$3,000. The grain was well insured.

A warehouse at Clinton, Ind., owned by Hamilton & Nebeker and occupied by Connor & Co., was destroyed by an incendiary fire at three o'clock A. M. Oct. 11, together with 6,000 bushels of wheat and several farm implements. The house was insured for half its value, and the grain for its full value.

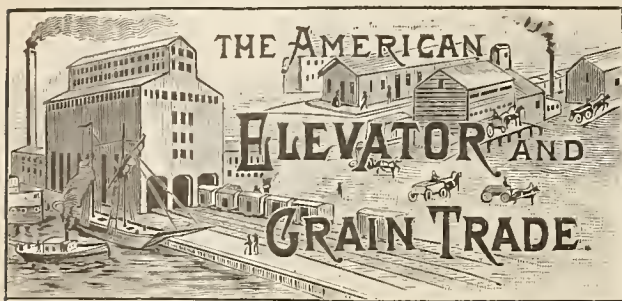
The grain-drying establishment of Byrnes & Son at Buffalo, N. Y., was burned Oct. 20. The fire destroyed a quantity of flaxseed in the dry kiln and 800 bushels of stored wheat. Loss \$20,000; on building \$7,000; insurance \$5,000. The establishment operated on grain that had been damaged by water while on the way to Buffalo in vessels.

A fire that started in Daniel J. Desey's feed store in South Chicago, Ill., at 7:30 o'clock Oct. 31, also damaged the Calumet Elevator Company's grain elevators to the extent of \$1,200; insured. The engineer of the elevator ably assisted the firemen with two streams from his stationary pumps, and the flames, which at one time threatened the total destruction of the elevators, valued at \$40,000, were soon extinguished.

The Gilbert Elevator at Ottawa, Ill., was burned at 8 o'clock P. M., Oct. 19. The fire started in the corn cribs and was communicated to the elevator, an old wooden building, owned and operated by Nash, Wright & Co. of Chicago, who had 3,000 bushels of oats and 2,000 bushels of corn stored. Loss on building \$5,500; insurance \$4,000; loss on grain \$2,000; insured. The fire is supposed to have been of incendiary origin.

An elevator at Pine Grove on the Newport News & Mississippi Valley Railroad near Lexington, Ky., was burned Oct. 26. The building was owned by Jones & Gay and occupied by William McEwan. Loss \$12,000; insurance \$5,000. There was no insurance on the contents. The fire originated in the basement where some negroes were boiling hemp, and spread rapidly until every house in the village but one was destroyed.

Fire destroyed the Advance Elevator in Peoria, Ill., at six o'clock A. M. Oct. 6, together with 80,000 bushels of various grains owned by the commission men and distillers. The fire started in the roof, presumably from a locomotive spark, and, fanned by a strong wind, spread until the whole structure was a mass of flames. The house, which had a capacity of 250,000 bushels, was owned and operated by the Advance Elevator Company, M. Kingman, president, and B. Warren, secretary and treasurer. Loss, on building \$35,000; insurance \$16,000; on grain \$40,000; insurance \$32,320. It was burned twice before.



— PUBLISHED ON THE FIFTEENTH OF EACH MONTH BY —

MITCHELL BROS. COMPANY.

(INCORPORATED.)

— OFFICE —

Howland Block, 184 and 186 Dearborn St.,
CHICAGO, ILL.

Subscription Price. - - - \$1.00 per Year
English and Foreign Subscriptions, - - 1.50 " "

English and Foreign Subscriptions may be sent to W. H. Smith & Son, 186 Strand, London, W. C., Eng.

A. J. MITCHELL, - - - Business Manager.
HARLEY B. MITCHELL, - - - Editor.

ADVERTISING.

This paper has a large circulation among the elevator men and grain dealers of the country, and is the best medium in the United States for reaching this trade. Advertising rates made known upon application.

CORRESPONDENCE.

We solicit correspondence upon all topics of interest connected with the handling of grain or cognate subjects.

CHICAGO, ILL., NOVEMBER 15, 1891.

THOSE "GOOD OLD TIMES."

Distance lends a good deal of enchantment to the view we take of things. Those who are old enough to remember a period when the "Good Old Times" were supposed to have an existence, are very liable to forget the poverty, the discomforts and trials of those days, and recall only the scenes and things that linger lovingly in the memory. A New York farmer, 80 years old, says that there is a good deal of humbug in referring to the good old days as the golden age of farming. He says:

"I remember when we used to haul our grain, butter, pork, eggs, and everything else we had to sell, all the way to Newburgh, taking one day to go and another to come home. We generally got 15 cents a bushel for oats and 10 cents a pound for butter. Anything like 75 cents a bushel for wheat was a fancy price. If we got 6 or 8 cents a dozen for eggs we thought we were doing well. Nice corn-fed pork, dressed, we carted to market for \$2 a hundred. The butter we put on the market in those days was the genuine Orange county article, yellow as gold and hard as a walnut. I have sold tubful after tubful of the choicest butter for 10 cents a pound that would net me 75 cents if I had it to sell now. As for taxes, I paid \$100 on my farm of 100 acres when I was getting 10 cents for my butter. On the same farm now I pay less than \$50, and I sell my entire dairy of milk for what would be more than three times 10 cents a pound for butter."

An old account book lately unearthed down in New England tells substantially the same story. It shows that in 1817 the following prices were paid by a customer at a store in Boscawen (now Webster), N. H.: One pound coffee, 25 cents; three-quarters pound loaf sugar, 27 cents; one-quarter pound tea, 25 cents; one-quarter pound powder, 17 cents; one-quarter pound shot, 17 cents; one-half dozen plates, 29 cents; three pounds cotton yarn, \$2.25; one nutmeg, 13 cents; three hoes, \$2; twenty-eight pounds fish, \$1.25;

one-quarter yard cotton lining, 8 cents; one yard flannel, 62 cents; twelve pearl buttons, 17 cents; one-half yard cambric, 24 cents; one and a half yards calico, 75 cents; one-half yard muslin, 42 cents; four and three-quarters yards fulled cloth, \$7.92; one gill New England rum, 10 cents; eight yards black silk, \$8; four yards calico, \$1; five yards cambric, \$3.05; one-half yard shirting, 34 cents; one gallon West India rum, \$1.40; one pound sugar, 20 cents; one felt hat, \$1.50; one ounce of indigo, 23 cents; one-quarter pound hyson tea, 42 cents, 5 yards calico, \$2.50. An item of credit that appears in the same book suggests the rate of wages then paid for transient labor in a community of farmers. It is: "One-half day's work, 25 cents.

The good old days were times of pinching poverty as compared with the present. We can hardly appreciate the immense change that has taken place except by going over, item by item, the things we have now which our fathers did not have, and many of which they never heard of. The wildest flights of fancy, a hundred years ago, could not have pictured what has actually taken place in the improvement of mankind's condition. With all the ills we have, everybody, Kansas farmers included, should rejoice that the good old days have gone, never to return.

PUBLIC WAREHOUSES FOR NEBRASKA.

Application has been made for a license for a public warehouse in Lincoln, Neb., by Harris Bros. & Co., and in Omaha by the Woodman-Ritchie Company. The capacity of the elevator at Lincoln, which will be licensed to do a public business is 85,000 bushels, and that at Omaha 600,000 bushels. The storage capacity is not great but it is enough to give the Nebraska farmers a chance to store grain and find out its advantages. State inspection has not been established at Lincoln but soon will be.

At Omaha State Inspector Blanchard has been inspecting grain and so far his work seems to have been satisfactory. The State Board of Transportation are not managing the inspection department affairs as well as could be desired or even expected. No benefits have yet been realized by the grain dealers of the state or of Omaha. It is difficult to see how any interest will be advanced by the law until the state exports large quantities of grain direct to the consumer or large quantities of grain are annually received from nearby states at the central markets of Nebraska.

DISCRIMINATING TOLL ON GRAIN.

The discrimination of the Canadian Government against grain transported at American ports has caused a greater commotion among lake carriers than among lake grain shippers, although both are directly interested.

The American canals, the St. Clair and the Sault Ste. Marie are free to all, but all vessels have a heavy toll to pay for passing through the Canadian canals. The toll on grain passing through the Welland Canal is 20 cents per ton, and 15 cents through the St. Lawrence Canals. When grain bound for Montreal is transferred from lake vessels to river barges at a Canadian port, the Canadian Government gives a rebate of 18 cents per ton, and free passage through the St. Lawrence. This is a direct discrimination against Ogdensburg and the Ogdensburg Transit Company, and in favor of Kingston.

Most of the grain shipped to Montreal from the United States by water is transshipped at Ogdensburg, so must pay heavy canal tolls. If it were not for this discrimination much more grain would undoubtedly be exported by way of Montreal. As by going that way it would escape the extortionate charges of the New York elevator pool.

A treaty exists between United States and the United Kingdom in which "The Government of Her Britannic Majesty engages to urge upon the Government of the Dominion of Canada to secure to the citizens of the United States the

"use of the Welland, St. Lawrence and other canals of the Dominion on terms of equality with the inhabitants of the Dominion. And the Government of the United States engages that the subjects of Her Britannic Majesty shall enjoy the use of the St. Clair Flats Canal on terms of equality with the inhabitants of the United States." Unless the Government of Her Britannic Majesty does some sincere and successful urging the United States Government will be justified in charging Canadian boats passing through American canals a toll equal to the discrimination against American boats passing through Canadian canals.

THE MIDDLEMAN'S PROFITS IN GRAIN.

The air is full of rumors of an Alliance elevator here and an Alliance mill there, with Alliance stores and agencies almost everywhere. Some of these schemes are already realized and others in great plenty are in process of incubation. They are all based on one assumption, viz., that the profits of the men who handle commodities, especially grain, are enormous and are made at the expense of the farmer. A great many people seem to imagine that the only obstacle in the way of realizing Liverpool prices for grain in Western Kansas, is the middleman; and that to abolish the middleman, or rather, take upon themselves the middleman's function, will result in immense advantage to the producers.

We wish that the article published elsewhere, "The Middleman in Grain," could be published in every agricultural paper in the United States, especially in those that are devoted to preaching calamity. If the facts could be widely known, many a foolish fancy would be dissipated and the plans of many a schemer frustrated. The average disciple of calamity has a very crude idea of the way in which traffic in grain is carried on after the stuff is delivered at the railway station. He charges the supposedly enormous profit on his grain, successively to the account of the buyer, the railroad and the commission man and believes himself the victim of downright robbery. The actual service of the middleman and the small profit he makes per bushel are never considered, and he is blamed for something he cannot help, viz., that the cornfield, the packing house and the city of consumers are not within teaming distance of each other.

EXPORTS OF BREADSTUFFS.

Everything points to the probability of the ensuing crop year being the banner year in our export grain trade. The wheat and rye exports will undoubtedly exceed all former years, corn exports will be large, and our exports of oats promise to be very heavy. Recently an investigation brought out the fact that vessel room had been chartered at four Atlantic ports for nearly 2,500,000 bushels of oats. The bureau of statistics reports that during October we exported 14,088,289 bushels of wheat, 1,115,358 barrels of flour, 3,416,522 bushels of corn, and 1,765,303 bushels of rye, against 3,100,000 bushels of wheat, 862,170 barrels of flour, 2,556,992 bushels of corn, and no rye during the same month last year. The exports of oats during October amounted to 203,513, against 49,678 for the same month last year; of barley 442,891 bushels, against 98,643 for the preceding October. The value of the breadstuffs exported during October was \$24,463,334, against \$8,343,246 for October, 1890.

During the four months ending with October we exported 10,513,864 bushels of corn, valued at \$6,860,317, against 15,342,013 bushels, valued at \$7,616,798 for the corresponding months of 1890. Of rye we exported 6,035,239 bushels, valued at \$5,617,291, against 260,289 bushels, valued at \$158,061 for the four months ending Oct. 31, 1890.

The wheat exports for the four months ending with October aggregated 64,503,187 bushels, valued at \$67,288,109, against 14,804,072 bushels, valued at \$13,336,139 for the four months ending

Oct. 31, 1890. The value of the exports of breadstuffs during the four months was \$101,158,156, against \$36,997,473 for the four months ending Oct. 31, 1890, and during the ten months ending with October the exports were valued at \$169,488,463, against \$119,037,156 for the same months of the preceding year.

WE CAN ASSIST YOU.

We can assist you in many ways through the medium of the AMERICAN ELEVATOR AND GRAIN TRADE, and would be pleased to have you accept our assistance. For \$1 we will send you one year the only journal devoted to the interests of the elevator men and grain dealers. If you do not think it is worth that much, just examine this number critically and be convinced that you cannot do business successfully without it.

We will be pleased to note any business change you may make free of charge. If you have opinions on any subject, or information of interest to our readers which you are willing to make public, use our "Communicated" department. If you desire information on some special point or question, use our "Queries and Replies" column.

We can assist you to secure a position, a location, an employe, a partner, an elevator or machinery through our department devoted to "Miscellaneous Notices." If you want to sell second-hand machinery, elevator, elevator site, or grain business, make use of our "For Sale" department.

A CORRECTION.

In our October issue we erroneously stated that the McEvoy elevator law had been decided unconstitutional by the highest court of the state of New York. Capt. M. DePuy has kindly called our attention to this mistake in a communication published in this issue. He also gives a short account of how the law was passed by the legislature and upheld by the courts. Our mistake arose not from a lack of knowledge of the facts, which have been stated in these columns, but from inadvertence in considering how the question came to be before a court of appeal. As precisely the point at issue has been passed upon by the Supreme Court of the United States in favor of the people, in deciding the constitutionality of the Illinois warehouse law, there is little doubt as to the final outcome of the decision on the McEvoy law.

REDUCTIONS IN THE YIELDS OF WHEAT.

The difference between the yield of wheat per acre on such new lands as Washington and Dakota afford, and the yield on the soil of older states, is a matter of frequent comment. The reduction in the wheat yield is charged up to a variety of causes, some alleging a change in climate and soil, others the cutting away of forests, still others the making of artificial improvements by which the natural drainage of whole basins is affected. It is curious that while any one of these causes might be considered adequate, if applied only to our own country, so few take into consideration the very pregnant fact that in England, France, and other older countries, no such reduction in yield has been noticed, although all the agencies have been at work which are alleged to be the cause of the reduction of yield on American soil.

Prof. A. E. Blount, in noticing the various theories, gives several of his own, which are entitled to consideration. He says: One source of a large decrease is, without doubt, the wonderful increase of noxious insects and fungus growths induced and encouraged, more than in any other way, by heedless and constant production of the cereals on the same land year after year. Greater, and I believe, the greatest difficulties and obstructions in the way of raising as much produce and as fine crops as formerly in all sections where it was once made successful, lie with the farmer himself. The fact that he pays little or no attention (1) to the preparation of his soil, drainage,

judicious rotation of crops, application of fertilizers at the proper time and in the proper quantity, and the time and manner of sowing his seed; and (2) to the selection of the best varieties of wheat for his locality and a continual annual selection of the best from them; and, lastly, by not satisfying the demands of his crop, are prolific sources of the small yields and failures now reported.

ANOTHER UKASE.

On the first of the month the Czar of all the Russias did the American grain growers and dealers a great favor by issuing a ukase prohibiting the exportation of all cereals except wheat, and now it is stated upon reliable authority that another ukase was issued yesterday prohibiting further exports of wheat.

The effect of this prohibition upon importing countries that have heretofore depended upon Russia for a large portion of their grain supplies is obvious. They must depend upon Canada and United States for most of their supplies, and will not only take more wheat than usual, but more of every other cereal we can spare. So in all probability our grain exports will exceed all former years. During the three years, 1890, 1889 and 1888, Russia exported 95,021,000, 95,000,000 and 106,000,000 bushels of wheat respectively. The exports of other forbidden articles were as follows:

	1890. Bushels.	1889. Bushels.	1888. Bushels.
Rye.....	49,605,015	54,365,760	67,254,150
Maize.....	13,294,095	17,349,210	14,260,305
Barley....	45,623,088	49,455,280	60,172,032
Oats.....	58,625,530	79,260,460	99,521,360
Buckwheat....	1,027,232	1,140,032	1,549,120
Peas.....	2,277,366	2,669,268	3,896,746
Beans.....	706,146	552,638	718,788
Rice.....	4,214	10,234	54,180
Total.....	171,162,686	204,802,880	247,426,681

GRAIN DEALERS ORGANIZING.

We are more than pleased to publish in this issue accounts of the organization of two grain dealers, associations. Each is supported by some millers and the Pennsylvania association will be known as a grain dealers' and millers' association. Men in these lines of business have many interests in common and suffer some evils that can only be remedied by combined effort.

The principal object of the Pennsylvania Association is to stop storing farmers' grain. It seems that the grain dealers and the millers of the Cumberland Valley have been storing their farmers' grain as an accommodation, without compensation and much to the inconvenience of themselves. Started as a favor to a friend it grew to a burdensome custom. The dealers are right in making an organized stand against the imposition. If the farmers want to store their grain in dealers' houses they should be required to pay a moderate storage rate; say, one cent. per bushel for first twenty days and one-half cent for each succeeding twenty days or part thereof, at owner's risk of fire. It would be worth more than this to them but few of them would willingly pay it, so the dealers would be greatly relieved without incurring the ill-will of the farmers. It is easier to tax an evil out of existence than to stop it by prohibition and the effect upon those taxed is not near so severe or lasting.

The other association formed is the State Grain Dealers' Association of Texas, and its purpose is as broad and admirable as its territory. It will try to bring the grain and flour interests of the state to work together in matters relating to freight rates, rapid transportation, standard grades and weights and the advancement of the interests of each line in the state. All business disputes between members will be settled by arbitration before a committee elected by the association. In every grain growing state there is ample room and much work for several such organizations. In many districts the dealers have suffered from existing evils so long that they seem to think it impossible to secure

relief so suffer gross impositions quietly, but in a few districts the dealers are becoming aroused and organizing against their wrongs.

INCREASED DEMAND FOR CORN.

The efforts of the United States Government to enlarge our foreign market for grain are being materially assisted this year by nature. While we have bountiful crops, foreign countries have short crops, and our strongest competitor has retired. Greater efforts are being made than ever before to induce importing countries to eat our cheapest food product—corn. It is much better than rye and much cheaper this year.

Since the United States Minister to Germany gave a dinner at which American pork and corn bread were served, the bakers have been unable to supply the demand for the various preparations of cornmeal. The reduction in price, which will take place as soon as the reciprocity treaty between Germany and the United States goes into effect, will further increase the demand for American corn. France and England will also import more than usual. Mexico's crop was so short that the people are suffering for food, and the import duty on corn will be removed. So the foreign demand for corn bids fair to surpass that of any preceding year.

The home demand will be greater than usual also by reason of several European countries admitting the corn-fed American hog, which has heretofore been prohibited. The home consumption of corn is also being increased by reason of the growing demand for new preparations of corn for human food.

THE CHICAGO QUOTATIONS MUDDLE.

There is no clearing up in the muddle over the sending out of Chicago quotations, although the Board has, by a strong vote, indorsed the position of the directors in the matter. A year and a half ago, in April, 1890, a decision of the court made it necessary for the Board to discontinue its quotation service altogether, or else make no discrimination in this service. As the members of the Board did not care to furnish quotations to the bucket shops, this service was discontinued altogether.

But members have grown tired of this, and telegraphic service on the floor of the Board was resumed on Nov. 1. Robt. Lindblom at once announced his intention to send continuous quotations to the St. Louis Merchants' Exchange, and proceeded to do so, asking for an injunction to prevent interference from the officers of the Board. The directors at once ordered Mr. Lindblom to cease sending quotations, whereupon he and his friends called a special meeting of the Board to decide whether he was transgressing his rights or not.

This special meeting, held Nov. 12, sustained the directors, which means that the present policy is to be carried out. That is, that while the telegraphic service is resumed on the floor, neither the Board itself officially, nor any of its members may send quotations from the floor of the Board. The Board cannot do otherwise under court decisions without laying itself liable to be called upon to furnish quotations to any one who asks them, bucket shops and all. The vote of the Board, overwhelmingly against Mr. Lindblom, shows that the members are not yet prepared to accept the alternative.

The farmers in the vicinity of Lake City, Minn., claim that the grain dealers of that place have formed a combine to control prices contrary to law and the local Alliance has appointed a committee to procure evidence and take the matter before the grand jury. The state or the farmers cannot compel grain buyers to pay any more for grain than they desire to pay and it is a waste of time and money to try to make them pay more. It would be as just for the grain dealers to seek the aid of the law in compelling the hold-your-wheat farmers to sell their grain at less than the market price. Prices cannot be governed by law.

Grain Dealers' Associations.

KANSAS AND NEBRASKA GRAIN DEALERS ELEVATOR ASSOCIATION.

President, MASON GREGG, Lincoln, Neb.; *Vice-President*, FRANK LOWER, Council Grove, Kan.; *Secretary*, W. T. CAYWOOD, Clifton, Kan.; *Treasurer*, O. A. COOPER, Humboldt, Neb.

STATE GRAIN DEALERS' ASSOCIATION OF TEXAS.

President, S. F. McENNIS, Dallas; *Vice-President*, E. EARLY, Waco; *Treasurer*, J. P. HARRISON, Sherman; *Secretary*, G. D. HARRISON, McKinney. *Directors*, J. F. McENNIS, J. P. HARRISON, E. EARLY, S. E. McASHAN of Houston and C. F. GRIBBLE of Sherman.

GRAIN SHIPPERS' ASSOCIATION OF NORTH-WEST IOWA.

President, T. M. C. LOGAN, River Sioux; *Vice-President*, H. HANSON, Odebolt; *Secretary and Treasurer*, F. D. BABCOCK, Ida Grove; *Assistant Secretary*, F. G. BUTLER, Schaller.

Executive Committee, E. A. ABBOTT, Des Moines; J. Y. CAMPFIELD, Sac City, and T. M. CATHCART, Kingsley.

GRAIN DEALERS' AND MILLERS' ASSOCIATION OF THE CUMBERLAND VALLEY.

President, S. C. WAGNER, Newville, Pa.; *Secretary*, JOHN A. MILLER, Oakville, Pa.; *Treasurer*, D. H. MILLER, Oakville, Pa. *Executive Committee*, J. K. BEIDLER, Oakville, J. W. SHARPE, Newville, U. G. BARNITZ, Barnitz; H. K. MILLER, Huntsdale, and J. H. BRINKERHOFF of Walnut Bottom, Pa.

ILLINOIS GRAIN MERCHANTS' INSURANCE AND PROTECTIVE SOCIETY.

President, H. C. MOWREY, Forsythe; *Secretary and General Manager*, S. K. MARSTON, Onarga; *Vice-President*, EDWIN BEGGS, Ashland; *Treasurer*, E. R. ULRICH, Jr., Springfield.

Executive Committee, E. F. NORTON, Tallula; F. M. PRATT, Decatur; T. P. BAXTER, Taylorville.

Committee on Claims, W. B. NEWBEGIN, Blue Mound.

GRAIN DEALERS' ASSOCIATION OF OHIO.

President, E. C. WAGNER, Columbus, Ohio; *Vice-President*, E. M. BENNETT, JR., Urbana; *Secretary*, E. W. SEEDS, Columbus; *Treasurer*, J. W. McCORD, Columbus. *Board of Managers*, J. C. HANNUM, Duvalls; J. W. JONES, Radnor; J. P. McALLISTER, Columbus; J. W. WOLCOTT, Conover, and N. R. PARK, Ada.

Legislative Committee, J. W. McCORD, D. McALLISTER, E. W. SEEDS, E. C. WAGNER, W. A. HARDESTY, and E. C. BEACH.

EDITORIAL MENTION

THE word "new" was dropped from Chicago wheat grades Nov. 1.

THE first car of new corn to inspect No. 2 at Philadelphia was grown in Illinois, and sold at 64½ cents.

EVERYTHING in the shape of marine tubs that can carry grain has gone into the grain trade on the lakes for the time being, and in consequence a vast amount of grain is going forward.

COPIES of the tenth annual illustrated catalogue of the Western Corn Sheller, cleaning machinery and general elevator machinery can be obtained by addressing Union Iron Works, Decatur, Ill.

SIR JOHN LAWES, the great agricultural authority of England, estimates the wheat requirements of Great Britain at six bushels per head, or 228,204,000 bushels for the whole population of the islands (about 38,000,000). He estimates the home produce at 72,000,000 bushels, and deducting for seed, estimates that the amount to be

imported for the year 1891-2 will be 160,000,000 bushels.

WE receive many news items by mail from our subscribers, but not half as many as we would like to receive. When anything occurs in your district that will interest our readers, send us an account of it for publication.

HIGH BROS. & Co., manufacturers of steam boilers and engines and electric motors, at 123 North Third street, Philadelphia, have been succeeded by J. L. & H. W. High, Mr. J. L. High having retired from the firm.

THE Philadelphia Car Service Association collected \$47,082 from shippers last year because they detained cars a few hours more than the association said they could. The shippers did not collect a cent for delay in the delivery of their goods.

NORTHWESTERN grain shippers are unable to secure all the cars they need, and it is said a number of elevators along the Chicago, Milwaukee & St. Paul are full of wheat, and business has been suspended as no grain can be received or shipped.

THE Chicago Board of Marine Underwriters has advanced the rates on grain from 60 cents per \$100 to 1 per cent. The non-board rate is 80 cents. These rates continue until Dec. 1, after which time until the opening of navigation, each company will fix its own rates.

THE Chicago barley syndicate has secured 250,000 acres located in Nelson, Norman, Towner, Ramsey, Steels and Bothman counties, North Dakota, and in the spring will send hundreds of German farmers there, men selected on account of their knowledge of barley culture.

A MEXICAN speculator tried to run a corner on corn in the state of Durango recently and the people shot him to death. Great destitution has been caused in that state by drouth. The dead speculator had received a large consignment of corn and placed the price at \$4 per bushel.

THE crop of broom corn is said to be at least 8,000 tons short and a great boom in prices has been the result. The price of broom corn has doubled in a few weeks and is now \$150 per ton. This is the sharpest advance in years, although broom corn has sold for much more than the present price per ton.

THE general freight agents of ten railroads have notified the grain trade that, taking effect Nov. 1, no shipments arriving at Philadelphia, New York or Baltimore consigned "to order—notify," will be delivered, or orders taken for delivery, without the surrender of the bills of lading, properly indorsed, to the railroad company.

SHIPPERS have presented a number of forms of bills of lading to the Western Traffic Association and have given it out that they would be satisfied if the roads would adopt any one of the forms presented. Grain shippers should not rest until they have a uniform bill of lading. It should be a clean bill of lading, not one which says that so much, "subject to correction" has been received.

A FIRM which does a large business in grain throughout the West advertises in a farmers' journal that it will store grain by the wagon or carload and advance cash; that it will attend to fire insurance, and will buy grain stored in its houses. With such an accommodating firm at nearby markets the farmers can easily hold their wheat, and that, too, without the aid of government pawnshops and worthless scrip. However, the farmer will soon tire of paying insurance and storage, and sell his grain when he takes it to market as heretofore. That this is his most advan-

tageous course is doubted by no one who is familiar with what is required to conduct successfully a grain shipping business at a country station.

COUNTRY grain dealers will be pleased to know that the move for the improvement of the country roads is gaining many friends and that in the near future they may expect to conduct their business without periodical depressions caused by bad roads.

A COMBINATION has been formed among insurance companies of New York harbor, and high rates for grain insurance have been established. The insurance men evidently think that because much grain is being exported our dealers are making large profits, and they propose to bleed them accordingly. The combine can easily be broken by inviting competition from outside points.

A MILLING exchange wants an export duty placed on wheat, but not on wheat flour, so that our wheat will be exported in the form of flour. This would be a very beneficial measure for our millers if it would work, but it would not. Importing countries would immediately place a higher duty on flour to protect their home millers, and would then buy their wheat of countries which did not levy an export duty upon it, as they could buy it cheaper of them.

THERE is a pretty good sized grain blockade already in the Chicago yards. The Burlington yard is jammed with carloads of grain, and the officials have been compelled to issue orders to load no more grain for Chicago for a couple of days, until the congestion has worked off. The grain receivers have been taking advantage of the forty-eight hours allowed for unloading to sell by sample wherever they can. Some of the roads are not blockaded simply because they are short of cars.

THE proposed change in the Baltimore wheat grades has been adopted, and the following grades of hard winter wheat established: No. 2 hard winter shall consist of the hard varieties, and shall be sound, dry, and reasonably clean, and weigh not less than 58 pounds to the measured bushel, Winchester standard. No. 3 hard winter wheat shall be sound and reasonably clean, unfit to grade No. 2 hard, but weighing not less than 55 pounds to the measured bushel, Winchester standard.

THE Eureka Works at Silver Creek, N. Y., will hardly "make even" on orders in time for the Christmas shut-down. An order, just received from Russia direct, calls for six of the big No. 8 Eureka Warehouse and Elevator Separators, which, with the four previously ordered, will make ten of these great machines in the service of one Russian house alone. Home demand is also very brisk, we noting that the new mill for the A. A. Freeman Company at West Superior is to have a full line of the Eureka machines, which includes the largest sized double receiving separators, milling separators, horizontal scouring machines, flour packers, etc.

ANOTHER railroad company has adopted the one-sided demurrage charge at all stations on its lines. This time it is the Chicago, Rock Island & Pacific. Its car service rules, which were put in force all along its lines Nov. 10, provide for a detention charge of \$1 per day after forty-eight hours have expired, either for loading or unloading, Sundays and legal holidays not included, and a fraction of a day being considered a day. The forty-eight hour limit begins at noon on cars arriving in the forenoon, and begins at 7 o'clock of the subsequent morning if cars arrive in the afternoon. Other Western roads, it is reported, will enforce similar rules all along their lines to alleviate the car famine. These rules are not very stringent and can easily be complied with. That their enforcement will somewhat relieve the stress for cars cannot be denied. A charge against car-

riers for delay in transit of goods would also hasten their delivery. Let all those who cause delay pay for it.

READERS will note the advertisement in this issue of the "Prinz" Cleaning Separator, made by the Prinz & Rau Manufacturing Company of Milwaukee, Wis. This is a unique machine, and in our next issue we shall take occasion to describe and illustrate it. Meanwhile the manufacturers will be pleased to give particulars to any who desire them.

AMONG our callers the past month was Mr. A. B. Colton, sales manager of the Racine Hardware Manufacturing Company of Racine, Wis. Mr. Colton brought a good report of the business done by his company in its numerous specialties. It is one of the busiest concerns in the country. The Racine oil burning engine is specially adapted for the use of elevators and similar establishments.

THE Main Belting Company of 248 Randolph street, Chicago, report a very large demand for Thompson's Belt Dressing, for which they are sole agents. This demand is largely from elevator men, for whose use it seems particularly adapted. It can be used on either leather, rubber or canvas belting. It preserves the life of the belt while increasing its efficiency, and renders the annoyance of tightening up unnecessary.

CHIEF INSPECTOR PRICE of Chicago fully explains in an article published elsewhere in this issue the effect the amended corn rule will have upon the quantity of contract corn made by the Chicago department. We trust his explanation will dispel any misunderstanding which any one has regarding the new rule. If it does not we will publish other articles on the subject. We will be pleased to hear from any one still in the dark.

THE crusade against the grain thieves at Montreal continues with good effect. Some of the thieves at Kansas City have also met with a setback. If your shipments are reported short do not fail to impress that fact upon the receiver and the carrier. If they know of the frequency shortages occur, they will be more vigilant in seeking the cause and willing to do more to diminish the shortages when compelled to take some action on the matter.

It is now definitely ascertained that a treaty between Germany and the United States has been signed, and its first announcement will be made in Germany to meet the request of the German minister. By this treaty, it is understood, although no authoritative announcement has been made, the same concessions are made to this country as obtain with Austria-Hungary. This would make the duties on breadstuffs about half those which are charged against our produce at present.

A TRAIN of steel grain cars has recently been constructed for the Chicago, Milwaukee & St. Paul Railway Company. The use of steel cars will be instrumental in reducing the loss of grain to shippers occasioned by the cars being broken open and by the car floors being bored full of holes while standing in the company's yards. The "shortages" which occur, or rather are made at grain transfer cars and at terminal and transfer elevators will continue until shippers stop patronizing the tricksters.

It is quite true that business men are sometimes ruined by speculation in grain and stocks, but it is not true that speculation is to blame for all the ruined lives and purses that are laid to its charge. At the recent meeting of bankers one speaker stated a fact when he said that Wall street and the exchanges are often visited by persons who are at the end of their rope, from business reverses or extravagant living, for the purpose of making a final "plunge" in the hope of regaining their fortunes. If unsuccessful, as they

usually are in a last desperate venture, their ruin is charged to speculation. The chosen seats of speculation are not health resorts, the speaker said, but to charge to them all the misfortunes that are exposed there would be as reasonable as to charge Colorado Springs with all the mortality recorded there.

GRAIN DEALERS at Montreal have been indulging in a discussion as to how many bushels shall constitute a carload and the grain committee has recommended that in making contracts for carloads, the quantity be specified, and that within 10 per cent. of such quantity, more or less, shall be delivered thereunder. A better way is to buy by quantity only. At present grain cars hold all the way from 20,000 to 40,000 pounds, so a carload is a very indefinite quantity in many markets.

INDIANA's eight hour law has again been sustained by the courts. The law was first sustained by a justice in whose court John Grissell sued the Noel Brothers' Flour and Feed Company of Indianapolis for \$125 in payment for overtime and a verdict for the same amount has been given by a jury in the Superior Court. The law provides that eight hours shall constitute a day's labor. If more is required it can be collected for unless the laborer contracts to work more hours per day for the wages agreed upon.

MANITOBA railroads are threatened with a grain blockade. It seems that the storage capacity of the province is nearly taken up, it is difficult to secure cars and some firms are calling in their buyers. The total storage capacity of elevators west of Lake Superior last January was only 7,628,000 bushels, and of this Winnipeg had less than 500,000 bushels. The erection of a few large elevators at this point would greatly facilitate the handling of Manitoba's grain crops and assist in building up the grain trade of the city.

ON the defeat of Robt. Lindblom at the recent meeting of the Chicago Board of Trade, his quotations to the St. Louis Merchants' Exchange ceased. When this became known, R. H. Nichol, who supplies the western and southwestern bucket shops with quotations, offered to supply them to the Merchants' Exchange. It is a rather anomalous state of affairs that under the conditions by which it is hoped to defeat the bucket shops, a regular exchange cannot get quotations which a bucket shop can. Some remedy ought to be devised to meet such a state of affairs.

A NEW export bill of lading has been adopted by the steamship lines of the Atlantic Ocean and accepted by the railroad companies between the Mississippi River and the Atlantic. It will be used for all shipments made after Dec. 1, whether shippers want it or not. The principal change in the bill is the insertion of a clause which provides that in case of British vessels, the contract shall be governed, so far as regards the responsibility of the carrier, by the law of England; other vessels by the law of the country to which the cargo is shipped. Shippers will be delighted to go to foreign countries to collect for lost or damaged grain.

SECRETARY RUSK's third annual report, which contains very much of interest pertaining to our agriculture, estimates that the increase in the value of agricultural products this year over last will not be less than \$700,000,000. He asserts that during the first three months of the present fiscal year American exports of cereals alone have aggregated \$76,000,000, with the indications that the sales abroad of the surplus from farms will during the present year largely exceed those of any previous twelve months. He notes the increase of some \$28,000,000 in the imports of agricultural products during the first ten months under the present law, by comparison with the same period during the last year under the old law, but emphasizes the fact that the increase is confined almost entirely to articles not competing

with home products, such as sugar, tea, coffee, etc. At the same time he claims that the changes in the rates have checked the importation of products which may be produced at home. He notes a decrease in tobacco imports from \$17,000,000 to \$6,000,000, a falling off in foreign barley of nearly \$3,500,000, in eggs \$1,250,000 in horses nearly \$1,500,000, and a gradual decline in the imports of all live stock.

GRAIN-DEALERS of Iowa will do well to explain to the editors of news sheets, who are now agitating for a state grain inspection law, the true value of such an incubus. The *Nonpareil* of Council Bluffs wants the farmers of Iowa to be loaded down with an expensive, useless inspection, just like the Nebraska farmers are now. The Nebraska farmers have not profited one whit by the sop thrown to them by the last legislature, but they pay dearly for the maintenance of a few barnacles to go through the motions of weighing and inspecting the grain on its way to a central market, where it is again weighed and inspected and sold according to the last inspection. Inspection is beneficial only at markets of general distribution. At other points it is an extra and useless burden upon the producer.

RECENTLY the elevator men and millers of Northfield, Minn., have been indulging in a little cut-throat competition, to the great pleasure of the farmers of the surrounding territory. Heretofore they have experienced no difficulty in agreeing to prices to be paid for grain, but one firm came to the conclusion that it was not getting its share of the grain, so advanced the price. The other buyers met this price, and the dissatisfied firm made another advance. This continued until the prices were higher than those ruling at Chicago or Minneapolis. This delighted the farmers, and all kinds of vehicles were brought into use to transport wheat to market. The firm which has the longest pocketbook is generally the winner in such fights, but it is a very expensive victory, and in the end he has naught to show for it. Any one can buy grain, but it takes a shrewd man to buy and handle grain at a profit.

COUNTRY shippers who have suffered losses by reported shortages at Kansas City, will be elated to learn that the police have found a nest of thieves and made five arrests. It was only recently that two cars were emptied of grain by thieves. The stealings from cars in the railroad yards became so frequent that the force of watchmen was increased, and the Commercial Exchange offered a reward of \$50 for the arrest and conviction of any one caught stealing grain from cars. Four boys were caught stealing grain, and from them it was learned that a gang of eleven boys was engaged in the same business, and a notorious tough was paying them and disposing of the grain. If railroad companies were compelled to give a clean bill of lading and deliver what they receive, they would have to pay for grain stolen from cars, and this would prevent losses to shippers from this and similar sources.

THE available stocks of wheat in the United States and Canada, as reported by *Bradstreet's*, show an increase during October of 17,182,810, as compared with 17,642,639 bushels in September and 3,714,872 in August. The stocks of wheat at the principal points of accumulation on Oct. 31 amounted to 50,524,454 bushels, against 36,577,055 on Oct. 3, 37,938,759 on Nov. 1, 1890, and 46,947,796 on Nov. 1, 1889. The stocks of corn on the last day of October aggregated 4,151,001 bushels, against 10,014,087 Nov. 1, 1890, and 11,032,365 on Nov. 1, 1889. The stocks of oats amounted to 6,627,893 bushels, against 6,863,307 on Nov. 1, 1890, and 12,561,963 on Nov. 1, 1889. The stocks of barley aggregated 3,960,339 bushels, against 6,005,405 and 2,768,372 bushels on the same day one and two years before. The stocks of rye were 2,832,634 bushels, as compared with 1,223,443 bushels on Nov. 1, 1890, and 1,563,910 on Nov. 1, 1889.

ELEVATOR AND GRAIN NEWS

Norcross, Minn., wants an elevator.

A hay press is wanted at Roscoe, Minn.

A rice mill is talked of at Fort Meade, Fla.

A grain elevator is being built at Stockton, Ill.

A third elevator is being built at Melita, Man.

M. Fink is building a brewery at Tower, Minn.

An elevator will be constructed at Velasco, Tex.

A starch factory is wanted at Grand Forks, N. D.

Frank Stang is building a brewery at Sandusky, O.

A cotton-seed oil mill is to be built at Cameron, Tex.

James Condon has built a steam elevator at Packwood, Ia.

A cotton-seed oil mill will be built at Jeffersonville, Ga.

A. M. Smiley, grain dealer at Storm Lake, Ia., has sold out.

J. W. Veitch, grain dealer at Durango, Colo., has sold out.

Weir & Wier are enlarging their flaxmill at St. Mary's, Ont.

J. McVicar is building an elevator at Otterbourne, Man.

Philip Streib is building a brewery at South Bend, Wash.

Wesner & Co. of Birmingham, Ala., will build a grain elevator.

Send us the news of your district for publication in our columns.

William Dale has built a grain warehouse at Campbell Ray, Que.

A 50,000-bushel elevator is being built at Brown's Valley, Minn.

C. Heinbockel & Co. of Brooklyn, N. Y., are building a brewery.

The farmers have just finished a 30,000-bushel elevator at Kent, Minn.

Dines & Cleveland of Winnipeg will build an elevator at Nesbitt, Man.

C. B. Pitman, dealer in grain and hardware at Pontiac, Mich., has failed.

The Columbia Brewing Company will build a brewery in St. Louis, Mo.

A. E. Tunberg, dealer in grain and lumber at Hooper, Neb., has sold out.

The Northern Seed Company of San Francisco, Cal., has been dissolved.

The Columbia Brewing Company of St. Louis, Mo., is building a brewery.

C. E. Anderson, dealer in grain and hay at Centralia, Wash., has sold out.

The St. Joseph Brewing Company of St. Joseph, Mo., will build a brewery.

S. Blum & Co., grain dealers at Martinez, Cal., have dissolved partnership.

The American Brewing Company of Providence, R. I., is building a brewery.

C. Hoffman & Son are building a 100,000-bushel elevator at Enterprise, Kan.

Martin & Waurock are building an elevator near their flour mill at Ottawa, Ont.

The Lafourche Distilling Company has been incorporated at Thibodaux, La.

Atchison & McKenzie have added an elevator to their grain house at Elizabeth, Ill.

The grain and flour examiners of Canada held a general meeting in Montreal Oct. 22.

A grain elevator is being built at Drumbo, Ont., by the Wolverton Milling Company.

H. B. Aldrich, grain dealer and member of the Chicago Board of Trade, has failed.

A new elevator has been completed by the flour mill company at Rocky Ford, Colo.

W. W. Ogilvie recently inspected thirty-two of his thirty-nine Manitoba elevators.

W. T. Henderson and J. R. Hale will build a grain elevator at Murfreesboro, Tenn.

George S. Harper and W. F. Tbayer, of the late firm of Harper, Stevens & Co. of Minneapolis, Minn., have

formed a new partnership, and will handle grain and mill feed as before.

Weatherspoone & Co. of Mercersburg, Pa., are making improvements in their elevators.

A. L. Brannock & Co., grain shippers at Kausas City, Mo., have dissolved partnership.

J. T. Thomasson and L. L. Peak will build a grain warehouse at Chattanooga, Tenn.

H. J. Rolfo, grain dealer at Elkhorn, Neb., lost \$500 in the failure of the Gretna bank.

The Reynoldton District Elevator Company has been incorporated at Reynoldton, Assa.

J. C. Horr & Co., dealers in hay and feed at Olympia, Wash., have dissolved partnership.

The Farmers' Elevator Company has been incorporated at Norcatur, Kan. Capital, \$10,000.

Dines & Cleveland, S. P. Clarke & Co., and N. Bawlf are buying grain at Niverville, Man.

Benjamin Barlow, grain dealer at Darlington, Wis., failed recently. Liabilities, \$60,000.

J. C. King of Port Hope may lease the Canadian Pacific Elevator at Port Arthur, Ont.

Patten Bros., grain commission dealers at Chicago, Ill., have been succeeded by J. A. Patten.

King, Grainger & Co., grain and produce commission dealers of Toronto, Ont., failed recently.

R. L. Searce & Co. of Moscow, Ky., have added a 12,000-bushel grain elevator to their mill.

Wasmer & Thomas, dealers in grain and coal at Grand Island, Neb., have dissolved partnership.

W. & E. Gearin, dealers in hay, flour and feed at Thorold, Ont., have made an assignment.

The Wredwood Distillery Company has been incorporated at Chicago with \$100,000 capital.

A grain and flour warehouse is under construction at Sherbrooke, Que., by Gendron & Denault.

The Santa Fe Elevator Company of Chicago has canceled \$40,000 worth of its 6 per cent. bonds.

The Luling Oil and Cotton Company has been incorporated at Luling, Tex., to operate oil mills.

J. A. Long & Co., dealers in grain and stock at Douglas, Neb., have sold out their grain business.

B. U. Dye has built a grain warehouse at Rocky Ford, Colo. It is 32x80 feet and covered with iron.

A 60,000-bushel elevator is being built at Winona, Minn., by the L. C. Porter Milling Company.

D. W. Canfield has taken charge of S. Fraser's grain business at Huron, Arner and Kingsville, Ont.

The Luthy Milling and Elevator Company has been incorporated at Bern, Kan. Capital stock, \$30,000.

E. S. W. Drought & Co., hay dealers and contractors at Kansas City, Kan., have dissolved partnership.

News of interest to the grain trade that you can send us will be published in our columns free of charge.

R. Muir & Co., dealers in grain and farm machines at Winnipeg, Man., have sold out to Stuart & Harper.

Jacob Kuebler will build a malting plant at Sandusky, O., which includes a 150,000-bushel storage elevator.

B. Jackson, grain dealer, and H. L. Preston, lumber dealer, of Dunlap, Ia., have entered into partnership.

J. M. Marion & Riopelle, dealers in grain, hay and tobacco at Montreal, Que., have dissolved partnership.

New machinery has been placed in the rice mill of the Carolina Rice Milling Company at Wilmington, N. D.

E. W. Bryaut, grain dealer and proprietor of a general store at Tekamah, Neb., has sold out his grain business.

The Interior Elevator Company of Minneapolis, Minn., has just completed a 500,000-bushel annex to its elevator.

The Mann Fraser Company, dealing in grain at Minneapolis, Minn., has increased its capital stock to \$75,000.

A 25,000-bushel elevator is being built at Milton, N. D., in connection with the roller mill at that place.

The grain dealers at Jamestown, Cloud Co., Kan., frequently buy more than twenty five carloads in one day.

An annex of 1,300,000 bushels' capacity is being built to one of the Canadian Pacific elevators at Fort William, Ont.

The Duluth Rolling Milling Company of Milwaukee, Wis., is building a 100,000-bushel elevator adjoining its mill.

Langenfield, Polders & Co., dealers in grain and live stock at Earling, Ia., have been succeeded by Langenfield & Co.

J. T. Holden, dealer in grain and agricultural implements at Plymouth, Ia., has been succeeded by Ward & Holden.

The Southern Manitoba Farmers' Elevator and Milling Company, Limited, has been incorporated at Crystal City. Capital stock \$10,000; incorporators George Tweed, William Davis, William Werry, William But-

chart, James Laidlaw, Robert McKay, William Robertson, Peter McLaren and Thomas Greenway, all of Louise, Man.

Washburne & Son of Springfield, Ore., are building a 6,000-bushel grain warehouse in connection with a new flour mill.

An elevator with a capacity of 100,000 bushels will be erected at Sheboygan, Wis., by the K. Schreier Brewing Company.

The Shelbyville Roller Mill Company has built an 8,000-bushel elevator, to be operated in connection with its flour mill.

Pekin, Ill., does a considerable grain business shipping large quantities of wheat, corn and oats to Chicago and Eastern cities.

William Peter has built a 20,000-bushel elevator at Columbia, Mich., to be operated in connection with his new flour mill.

Stenger & Fink, proprietors of a grain warehouse and flour mill at Napakoneta, O., failed Nov. 5. Liabilities \$40,000; no assets.

Baker & Melcher, dealers in grain, lumber and agricultural implements at West Point, Neb., have dissolved partnership.

The Porter Elevator at St. Ekton, Minn., is receiving large quantities of barley from farmers. Lack of cars prevents shipments.

The new Minnesota Elevator of P. D. Armour & Co. at Chicago loaded its first cargo of grain Oct. 13 into the steamer Commodore.

The Tacoma Warehouse and Elevator Company of Tacoma, Wash., has increased its capital stock from \$100,000 to \$150,000.

Martin, Mitchell & Co. of Winnipeg, Man., are, it is said, making large shipments of wheat in bond to Europe by way of Duluth.

The Melita Milling Company has been incorporated at Melita, Man., with \$40,000 capital, to build and operate elevators and flour mills.

A 250,000-bushel elevator will be built at West Superior, Wis., and a large flour mill by the Daisy Roller Mill Company of Milwaukee.

H. H. Aldrich, a member and director of the Chicago Board of Trade, suspended business Oct. 29. He was short on November corn.

Fred Sammis, South Dakota agent for Nye & Schneider of Le Mars, Ia., fled to Mexico recently with \$3,000 of the firm's cash.

Moore Hill of Carman, Man., has sold his grain business to Mr. Ardington, and will buy grain for Atkinson & Cummings of Winnipeg.

A committee of the Chicago creditors of S. V. White & Co. has unanimously voted the acceptance of fifty cents on the dollar in full settlement.

George D. Stevens of the late firm of Harper, Stevens & Co. of Minneapolis, Minn., will continue in the grain and mill feed business on his own account.

The Interstate Farmers' Alliance and Industrial Union of Kansas and Missouri contemplates erecting a large grain elevator and flour mill at Kansas City.

The M. Belden Grain Company has been incorporated at Galesburg, Ill. Capital stock \$10,000; incorporators, Marcens Belden, M. H. Belden and Henry Leland.

The Nordyke & Marmon Co. of Indianapolis, Ind., recently received an order for a lot of rice milling machinery from Dan Talmage's Sons of New York City.

The elevator which is being built in connection with Capt. Ryan's "Clinton Mill" at Buffalo, N. Y., will soon be completed. Its capacity will be 120,000 bushels.

The Grand Trunk Railway has closed its elevators at Collingwood and Midland, Ont., by agreement, it is said, with the Canadian Pacific, which will carry all the grain.

The Terminal Elevator Company of Minneapolis, Minn., will put in dust collectors to gather the dust from the cleaning machines and blow it into the boilers for fuel.

B. J. McGinnis and Matthew White of Ottawa, Ill., have formed a partnership to do a grain business. They have taken possession of the Eames warehouse for that purpose.

The wheat damaged in the fire which recently destroyed the Baltimore & Ohio "Elevator A" at Baltimore was sold to Smith, Hammond & Co., for A. W. Reed & Co., for \$4,000.

W. D. Cook has sold his elevator and mill at Wolseley, N. W. T., to Dill, McPhail & Thompson, who will operate the plant under the firm name of the Wolseley Milling Company.

The Consolidated Milling Company is building a 200,000-bushel elevator at Minneapolis, Minn. The cribbing has been finished, and the work on the cupola has commenced.

The Empire Elevator Company of Minneapolis, Minn., is rebuilding "Elevator C" and annex which was recently burned. Barnett & Record, the elevator builders of that city, have the contract. The elevator will have a capacity

for 200,000 bushels grain, and will have a full equipment of cleaning machinery. The annex will be of 400,000 bushels' capacity. The boiler and engine rooms will be fireproof.

The Rankin Grain and Mercantile Company has been incorporated at Rankin, Vermillion Co., Ill. Capital \$10,000; incorporators W. A. Rankin, B. H. Durham, B. R. Cole and others.

The Elmendorf-Watte Company has been incorporated at Chicago to deal in grain and provisions. Capital stock, \$50,000; incorporators, J. M. Watte, F. T. Blake-more and W. J. Taylor.

Business has been very good this season with the Kingston and Montreal Forwarding Company, which transports grain by barge from Kingston down the St. Lawrence River to Montreal.

The Cache Valley of Utah ships an average of twenty cars grain daily, mostly from Richmond and Wellsville. Farmers near Smithfield, Franklia and Mendon are reported as holding their wheat.

The Davies-Porter Company has been incorporated at Minneapolis, Minn., to deal in grain on commission. Capital stock \$50,000; incorporators, Frank L. Davies, George F. Porter and Fred M. Davies.

During the year the new Baltimore & Ohio Elevator at Fairport, O., has done business at a loss. Shortages were very frequent early in the season, and vessel owners refused to take grain to that port.

The St. Jacobs F. M. B. A. Elevator Company has been incorporated at St. Jacobs, Madison Co., Ill. Capital stock \$5,000; incorporators Adam H. Faires, R. Malone, Fred Noll, J. G. Miller and Rufus Pike.

The Dennead Malting Company has been incorporated at Baltimore, Md. Capital \$90,000; incorporators Francis Dennead, J. F. Wiessner, Jr., F. Bauerusmidt, G. F. Gibney, S. Hellsdorfer and H. G. Remmers.

The Bryan & Richardson Company has been incorporated at Austin, Tex., by S. J. Bryan, W. H. Richardson and W. Lockridge, to build and operate grain elevators, wharves, mills, etc. Capital stock \$25,000.

It is claimed on good authority that Gill & Fisber of Baltimore, are not buying corn in Kansas City, as reported, and what little corn has been sold was bought by Southern buyers. Kansas is holding its corn.

The people of La Harpe, Kan., "held their corn" donated last year for the improvement of their church building, refused an offer of 16 cents for it, and have sold at 42 cents, realizing \$300 for the meeting house.

The Cheneyville Grain Company has been incorporated at Cheneyville, Vermillion Co., Ill. Capital stock \$20,000; incorporators Miles Odle, Elijah Evans, James F. Warner, Benjamin Ziegler and O. B. Rollins.

The Treherne Farmers' Elevator Company has been incorporated at Treherne, Man. Capital stock \$12,000; incorporators Robert Warren, Alexander Robertson, Robert M. Ferris, James K. Robson and Joshua A. Lewis.

The new Wells Elevator at Buffalo, N. Y., has been completed and placed in operation. It occupies the site of the one that was burned a year ago. The capacity is 500,000 bushels. It contains two boilers and a 300-horse power engine.

A 150,000-bushel grain elevator is being built at Benton Harbor, Mich., by the Metcalf-McDonald Company of Chicago for the Milwaukee & Eastern Transit Company, which operates a line of steamers between Milwaukee and Benton Harbor.

A. F. Metelman, banker, and several other citizens of Sidney, Ia., have given Frank Kaucher, the grain elevator architect of St. Joseph, Mo., the contract for a new shelling and cleaning elevator and complete plant, to be ready to handle this year's crop.

Frank Kaucher, grain elevator architect of St. Joseph, Mo., has made a contract with the Nebraska City Starch Company of Nebraska City, Neb., for a complete elevator plant of 20,000 bushels' capacity, to be built in connection with its new and mammoth works.

The Northern Central Railway Company recently completed Elevator No. 2 at Calvert Station, near Baltimore, Md., which is intended for the handling of oats, corn and other grains for city delivery. Ira Day, the superintendent, will have his office at Calvert Station, Baltimore.

The Frederick Elevator Company has been incorporated at Frederick, Md., for the purpose of operating a grain elevator. Capital stock, \$20,000; incorporators, Douglass H. Hargett, Samuel Hoke, Jr., G. T. Whip and others. The company will build a 50,000-bushel elevator.

A. G. Thompson of Montreal, bought 15,000 bushels of oats from Stark Bros. & Co. of Toronto, last April, and afterward claimed a rebate of \$750, alleging that the oats were not up to sample, but the Toronto Board of Trade's arbitration committee recently decided in favor of Stark Bros. & Co.

One or two Canadian firms that were largely engaged in the barley export trade with the United States in the past are this season shipping barley to the American markets, not in the expectation of making anything out of it, but solely with the object of keeping the channel open to what in the past have been the most profitable

markets, hoping that in the near future those markets may again be thrown open to the Canadian grain.—*Globe, Toronto.*

A new elevator has just been completed at Newark, N. J., for the J. C. Smith & Wallace Company. Its capacity is 100,000 bushels. It is fitted with machinery for clipping oats and grinding cornmeal. J. C. Smith is president of the company, A. B. Wallace treasurer, and Fred W. Ward secretary.

The million-bushel Elevator No. 3 recently completed by the Northern Central Railway Company at Canton, near Baltimore, Md., will handle export grain, and will be operated under lease by the Baltimore Elevator Company in connection with Canton Elevator No. 1, which has a capacity of 500,000 bushels.

Powers & Co., grain dealers of Boston, with a mill at Charleston, Mass., have sued the Boston & Maine Railroad Company for \$100,000 under the In-state Commerce Law, for charging excessive rates. It is the first suit of the kind in Massachusetts, and the case will be tried in the United States Circuit Court.

Silas W. Petit of Pennsylvania, has filed a bill for an injunction in the United States Circuit Court at Chicago to prevent the management of the United States Starch Works at Waukegan, from transferring stock to the United States Sugar Refining Company of Waukegan, with a view to freezing out complainant and his friends.

James Stewart & Co., grain elevator builders of St. Louis, Mo., were awarded the contract Oct. 23 to build an elevator for the Galveston Wharf Company at Galveston, Tex. It is to have a capacity of 1,000,000 bushels and will cost \$200,000 when completed May 1. It will be 90x287 feet and 156 feet high with 158 bins. Its loading capacity will be 200 cars daily.

Thieves attempted to steal grain from McLellan's grain store at London, Ont., at midnight Oct. 10, but were discovered by a passero and frightened away. Mellhargy, the grain buyer, and another man, guarded the store until daylight, when a queer car with noiseless wooden wheels was found on the adjoining railway track, evidently intended as a means of carrying off the sacks of grain.

The new warehouses of the B. & O. R. R. at Fairport, O., which are each 90 by 460 feet, are now nearly completed. The elevator which stands between the warehouses has a capacity of 1,200,000 bushels. It has been shown this season that fair treatment at the hands of elevator men is required by the vessel trade, and Fairport will no doubt receive a share of such patronage when good facilities and close weighing mark the elevator management.—*Marine Record.*

The Farmers' Alliance has built numerous warehouses in Eastern Washington during the past two years. The Plaza Warehouse Company, with W. J. Nickerson, manager, does business at Plaza in competition with the Northern Pacific. At Rosalia the Rosalia Alliance Warehouse Company recently completed a house and placed S. S. Brockway in charge. The large warehouse at Sunset was built this fall. Mr. Barnes is manager. During the summer a warehouse 40x200 feet was built at Fairfield; George W. Ingram manager. At Latah a new warehouse was recently completed and placed in charge of Mr. Chase.

A smart St. Louis grain dealer received Buffalo's opinion of certain transactions of his a few days ago, in a nutshell, or, rather, in an envelope. He was anxious to sell a car of damaged grain he had on track here, and wrote about twenty-five letters to various members of the trade, asking them to make him an offer on it. The recipients compared notes on the situation and thought the case worth special attention, so one of them gathered up fifteen of the letters and mailed them back to the writer in a bundle. Soon return letters were received, full of apologies for the style of doing business. But the grain was sold by the device.—*Buffalo Correspondent Northwestern Miller.*



CORN ON THE EAR.

PRESS COMMENT.

A LIVELY TIME EXPECTED.

Considerable freight has already been engaged for Canadian grain via Portland and Boston, and a lively time is expected during the coming winter. This should be the precursor of better times in trade generally. It is thought that we are on the eve of a larger movement in Manitoba wheat, which will also improve the commercial situation, and as fairly remunerative values are looked for both as regards wheat and coarse grains it is only reasonable to look for better times ahead.—*Trade Bulletin, Montreal.*

ABE WISE TO SELL.

Europe, as well as America, has become used to a smaller margin of profit on almost all staples within the past eleven years, as well as to lower ranges for prices. Cheaper water and rail rates have had a hand in this, and "wages and the cost of living have been modified by these new conditions." In addition to the foregoing influences on prices now as compared with 1880, it is not unlikely that oats, barley, and even corn, may to a certain extent be used as substitutes for rye—the great bread cereal of Central and Eastern Europe—instead of calling for wheat to meet that deficiency to the full extent. It is therefore held that farmers of the Northwest are wise to sell their crops freely at ruling prices, thus securing a profitable return for investment, time and labor.—*Bradstreet's.*

AMERICAN WHEAT IN EUROPE.

The peculiar conditions prevailing this year in the cereal world ought to result in even greater benefit to American wheat than the spot gain of good prices for a great crop of that cereal. This year much more wheat grown in the United States will be ground in European mills than ever before. Should Russia decide to stop exportations of wheat, it is probable that about 250,000,000 bushels of United States wheat will be sent to Europe, the vast bulk of it going as grain. It is morally certain that many European millers, who have never yet ground American wheat, will find it so fine and so desirable an article that they will be glad to keep up the acquaintance with it forced upon them this year.—*Milling World, Buffalo.*

PROFIT ABSORBED IN MOVING.

The higher cost of ocean freights to Europe for grain and flour is an important matter and absorbs very much of the extra prices they sell for in Europe, as compared with a year ago. Wheat in Liverpool and other United Kingdom ports is equal to some 12 cents a bushel higher than a year ago and is equal to some 20 cents a bushel higher than it was two years ago, while in Minneapolis and other American markets the price is about 8 cents lower than it was a year ago. It was probably true the competition of carriers for business left them no profit in moving these commodities, but it is apparent they are prepared to recoup from the present crop and make good average earnings. When nature makes fair distribution the carriers suffer, but when commerce is called in to equalize what nature left unequal it must be paid for redistribution.—*Minneapolis Market Record.*

PRICE OF CORN.

An Eastern exchange talks learnedly about the high price of corn, as likely to cause a large part of the crop to be "left unconsumed." The impression is conveyed that the 70 cents per bushel now paid on the seaboard is for corn of the new crop, and that at such figures the foreigners will not buy much of it. All of which is a mistake. The big premium paid is due to the fact that the kind of corn wanted by purchasers is scarce, and for the reason that the corn of the new crop is not yet dry enough to fill the bill. Hence it is idle to moralize and tell people if they would only consent to accept less per bushel for their corn they could sell a great deal more of it. If they now had it to sell they would forward it in much greater quantity, to take advantage of the higher price, and the greater offerings on the market would soon abolish a part of the premium, if not all of it.—*Chicago Tribune.*

During September and October 15,298 bags of clover seed were exported from New York, against 17,061 bags during the same months of 1890.

The last report of the Ohio Agricultural Bureau shows the wheat area seeded for harvest of 1891, 2,613,281 acres. Sown this fall for harvest of 1892, compared with last year, 106 per cent. Estimated area for the harvest of 1892, 2,795,215 acres. Condition of plant compared with a full average, 76 per cent. Average date of seeding, Sept. 25. Condition of soil at time of seeding, mostly fair. Barley, acreage compared with last year, 86 per cent. Condition compared with full average, 77 per cent. Corn, prospect compared with a full average, 95 per cent. Buckwheat, prospect compared with a full average, 80 per cent. Clover seed, prospect compared with a full average, 47 per cent. Potatoes, average product per acre, 99 bushels; affected by rot, 3 per cent.

WATERWAYS

Losses on the lakes during September and October aggregated over \$600,000, of which \$465,000 was insured.

Advance charters provide for the exportation from Atlantic ports of 31,706,000 bushels of grain up to Feb. 28.

The Mississippi River Commission met at St. Louis Nov. 5, and proceeded down the river on a tour of inspection.

At this time of year shortages are usually very large and frequent in lake cargoes, but this year there seems to have been an improvement.

A scheme is on foot, it is said, to construct a ship canal from Chicago to Toledo via Goshen, and also to deepen and enlarge the Erie Canal.

Erie Canal freights from Buffalo to New York in the first week of November were, wheat 4 cents, barley 3 1/4 cents and flaxseed 3 3/4 cents.

Low water caused the grounding of the barge Nelson at Buffalo recently, and the floating elevator Cyclone unloaded a part of the cargo so that the vessel could reach the Exchange Elevator.

Most of the land needed for the Hennepin Canal has been secured. When the remaining condemnation proceedings have been ended, nothing will hinder the rapid prosecution of the work.

The first canal maker in England is said to have been Morton, the bishop of Ely, who, in the reign of Henry VIII, constructed a cut for navigation between Peterboro and the sea forty miles long.

As an unusual event it should be chronicled that the Baltimore & Ohio elevator at Fairport, O., received a cargo of grain Oct. 24. Vesselsmen have given Fairport a wide berth during the season.

A lake waterways convention will soon be held, probably in Chicago, to call the attention of Congress to the necessity of deepening the channels connecting the great lakes, favoring a depth of twenty feet.

Roblin & Armitage, grain dealers of Winnipeg, lost \$17,000 worth of wheat in the steamer Sovereign, which was sunk in deep water in Lake Superior recently, while on the way from Fort William to Buffalo.

The Erie Canal boats carried less freight this season than last year. For the five months ending Sept. 30, 1891 3,159,527 tons freight was transported, against 3,682,051 for the same months last year. More wheat was carried this year than last, however.

More money is needed to complete the Chignecto Marine Transport Railway. The company has found it impossible to sell bonds, and petitions the Canadian Government for a removal of the restrictions that make the payment of the subsidy conditional.

The steamer Susan E. Peck, which sank in Lake George Oct. 10, obstructed the Sault Ste. Marie Canal until a new channel was dredged, a week later. Even after the channel was dredged only a few vessels out of the large number delayed, could get through.

A record for quick loading was made by the steamer Tynehead, which arrived at Baltimore at 6 A. M. Oct. 31, and reached the new elevator No. 3 of the Northern Central Railroad Company at 8 o'clock. Loading commenced at 1:15, and in six hours was completed, with 106,200 bushels of wheat in bulk and bags.

The Trans-Mississippi Congress at Omaha, Oct. 21, adopted resolutions declaring that the interests of the Western states demand the construction of a ship canal from the lakes to the sea, asking Congress to aid in the completion of the Nicaragua Canal, and favoring the improvement of the Mississippi River.

The Board of Trade of Fort William, Ont., has appointed a committee to draft resolutions calling the attention of the government to the necessity of dredging the river to a depth of twenty feet, so that the advantage can be taken at the earliest opportunity of the opening of the Canadian Sault Canal. However, it is expected that the canal will not be finished for three years to come.

The steamer J. C. Ford arrived at Buffalo recently with 19,000 bushels of grain, of which 48 bushels were wet, and only 2 bushels short. The elevator attempted to collect for the wet grain, but on the part of the vessel it was claimed that the shortage allowance of 2 bushels per 1,000 in the bill of lading should be applied on the wet grain, so that only the value of 12 bushels could be collected. It was so decided.

A war in grain insurance was inaugurated at Chicago Oct. 27, on the discovery that a member of the Board of Marine Underwriters had privately insured grain to Buffalo at 50 cents per \$100, 30 cents less than regular rates. This reduction comes just in the period of the season when heavy losses may be expected. The reduction is 20 cents all around, as follows: To ports on Lake Michigan, 50 cents; Lake Superior, 70 cents; Lake Huron, Sarnia and Detroit River, 55 cents; Georgian Bay and

Lake Erie, 60 cents; Lake Ontario and Ogdensburg, 70 cents; Montreal, 85 cents.

At a meeting held Oct. 13 at Kansas City the Kansas City & Missouri River Transportation Company arranged to run the steamer Mason on the Mississippi below St. Louis during the winter in the Anchor Line. The Missouri and the Kansas will run in the Southern Transportation Company's line between Cincinnati and New Orleans.

Most of the grain shipped from the Pacific Coast goes in foreign built bottoms. On Puget Sound, Wash., are all the requisites for building cheap and good wooden vessels, and shipbuilders are beginning to use the splendid timber that grows there. Last year fifty-nine vessels were built on the Pacific Coast. Some time the grain grown on the Pacific slope may be exported in American vessels built of timber also grown in that region.

Captain J. S. Dunham of Chicago proposes to dam the Niagara River, to secure a greater depth of water in the great lakes. His plan is to dump many thousand boatloads of stone below Tonawanda, where navigation ends. For several years the level of the lakes has been falling, and large vessels are unable to carry their full cargoes. With deeper water larger loads could be taken, resulting in more profit to the ship owner and lower rates to the shipper.

More ships are in port at San Francisco than ever before. Most of them were chartered previous to arrival at very high figures, and the speculators who paid from 40 to 45s. per ton to European ports, are compelled to forfeit their charters, as rates are now ruling at 35 to 37s. per ton. Should they load wheat at such high rates a heavy loss would be sustained on arrival at Liverpool, because they would have to sell in competition with those shippers who secured the lower rates.

In answer to the question as to what is to be done with the Erie Canal, Capt. M. De Puy of New York says: Give the Erie boatmen justice in terminal charges and an honest canal management. As long as grain shipped by canal is made to pay an overcharge of 1 1/4 cents a bushel to their railroad allies, what can be expected of the Erie boatmen? Besides this outrageous extortion the present Erie Canal officials allow water to be stolen from the canals until boats are moved with great difficulty.

Not often does a vessel get more for carrying one cargo than the whole ship is worth, but this once occurred at San Francisco. The little Japanese boat Fu Ju Maru, 557 tons register, arrived there in August, 1872, and was sold at a high valuation for \$17,000. Her name was changed to Admiral De Ruyter, and she took a cargo of wheat to Cork at £5 5s., thus earning \$18,457, or nearly \$1,500 more than it was worth. At that time competition among shippers forced rates up to extremely high figures. As high as £5 12s. was paid to Liverpool direct.

The Ogdensburg Transit Company during the season has carried grain from Chicago and Duluth to Ogdensburg without transshipping at a Canadian port. This prevents the company from securing the rebate of the canal toll, which is allowed by the Canadian Government on vessels passing through the Welland Canal bound from an American port to a Canadian one, and vice versa. They want the Dominion Government to refund the rebate on the ground that as the grain was for shipment from Montreal they should not be prevented from transshipping at Ogdensburg in preference to Kingston, especially as all their elevating facilities are at Ogdensburg.

The Western Waterways Convention met at Evansville, Ind., Oct. 14, and was called to order by Hon. D. B. Wood of Louisiana. Charles Anderson, formerly governor of Ohio, now a resident of Kuttawa, Ky., was chosen permanent chairman, and after a short address the convention was permanently organized. The following states were represented: Montana, Arkansas, West Virginia, Illinois, Tennessee, Louisiana, Mississippi, Ohio, Indiana, Alabama, Texas, Pennsylvania, Missouri, Minnesota, Iowa, Kentucky and Wisconsin. They ask the government to adopt a fixed policy in the improvement of waterways; implore Congress to adopt a plan of continued appropriations; recommend an increase in the number of lights, dredges and snag boats; demand that bridges shall be so constructed as to least obstruct navigation; that Congress shall make it a penal offense to dump refuse in rivers; recommend the construction of more navigable dams in the Ohio; approve the Hennepin Canal project, and favor the building of a canal that will connect the waters of the Ohio with the great lakes.

The Michigan state agricultural report to Nov. 1 gives the condition of the fall-sown wheat at 91, as against 105 one year ago, and the acreage 101 compared with 100.

I want to preach a sermon to writers of advertising. Be serious as far as possible; real humor is rare, and few matters of business will stand its touch. Be frank; tell your story with earnestness and directness! Be true! All men may be liars, but the hatred of a liar is equally universal. It is easy to bring contempt upon a business by overstating its merits! Be pure! A lewd man makes a poor artist. Purity of thought tends upward; purity of language lends strength to the assertion. Do not attempt grand language; a man walking on stilts is seldom graceful. Simplicity of style made the tinker Bunyan famous. Big words work no wonders, but they often give measure of a little mind.—*A. Ward in Printer's Ink.*

ITEMS FROM ABROAD

The Argentine Republic has an earlier harvest this year than last. A good crop is expected.

The United Kingdom will, it is estimated by J. B. Lawes and the *Liverpool Corn Trade News*, require 160,000,000 bushels of wheat from foreign lands.

A corner in rye is being operated by Russian speculators. It is said to be their intention to force the price up to three rubles per pood—\$1.85 per 36 pounds.

A memorial has been presented to the Russian Minister of the Interior and the Famine Commission, urging that a lower duty be placed on importations of American cereals.

Vast quantities of refuse from beet sugar factories are being used in Russia, together with a small percentage of rye flour, in the baking of bread for the starving peasants.

It is reported that the Russian Government will prohibit the exportation of all kinds of grain, including corn, oats, buckwheat and millet. In consequence holders of wheat are asking higher prices.

Holland imported in September 1,848,000 bushels of wheat and wheat flour, and 2,496,000 bushels of rye and rye flour, compared with 2,272,000 bushels wheat and flour, and 992,000 bushels rye and rye flour in August.

Italy's crops are above the average. Wheat yielded 123,600,000 bushels, corn 64,544,000 bushels, oats 16,480,000 bushels, barley 9,608,000 bushels, and rice 19,224,000 bushels; 85 per cent. of the wheat crop is of very good quality.

The imports of wheat, and flour in its wheat equivalent, into Italy during September amounted to 800,000 bushels, the exports to 12,000, leaving a net import of 788,000 bushels, compared with 1,040,000 bushels in August, and 1,048,000 bushels in September, 1890.

Less than 800,000 bushels of rye are in stock at St. Petersburg, and with the cessation of receipts from the interior the demand will be met with great difficulty, if at all. A cargo of 50,000 bushels of American rye is on the way, to arrive before the close of navigation.

Russia's exports during the ten weeks following the commencement of the cereal year, Aug. 1, have been 22,416,000 bushels wheat, 14,974,000 bushels rye, 11,892,000 bushels barley, 10,507,000 bushels oats, and 2,220,000 bushels corn, compared with 22,560,000 bushels wheat, 10,269,000 bushels rye, 14,058,000 bushels barley, 12,939,000 bushels oats, and 1,654,000 bushels corn, in the same weeks of 1890; and 21,132,000 bushels wheat, 9,317,000 bushels rye, 11,725,000 bushels barley, 15,637,000 bushels oats, and 2,991,000 bushels corn, during the corresponding period of 1889.

The commission for the development of exportation at St. Petersburg has just decided that from the commencement of the year 1892 exporters of grain passing from ports in the Baltic, the Black Sea and the Azoff, will be obliged to furnish to the custom house at the loading ports samples of the grain to be exported, with a statement showing its quality and quantity. The inspectors for this duty will be stationed at Odessa, Nicolaieff, Sebastopol, Taganrog, Rostof, St. Petersburg, Reval, Riga and Libau. In the event of consignees not receiving their grain according to sample they will simply have to state the difference to the Russian consul, who, after investigation, may order the shippers to pay such fine as he may please to fix.—*Liverpool Corn Trade News.*

PERSONAL

Ira Day has taken charge of Elevator No. 2 at Calvert Station, Baltimore, Md., as superintendent.

J. M. O'Shea has been re-appointed chief grain inspector by the Missouri Railroad and Warehouse Commission.

John O. Foering, chief grain inspector at Philadelphia contemplates a visit to the West to investigate the condition of the new corn crop.

Duncan G. McBean of McBean Bros., grain dealers of Winnipeg, Man., left Montreal with his wife recently to spend the winter at Winnipeg.

Numerous inquiries have lately been received with respect to the grading of corn in this market. For the information of Western and Southern shippers, Mr. John O. Foering, chief grain inspector, authorizes the statement that the grade of No. 2 mixed of this city is identical with that of mixed or sail mixed in Baltimore. Any statement to the contrary is untrue.—*Philadelphia Price Current.*

Latest Decisions.

Illegal Subject Matter of Telegram.

After receiving a telegram for transmission, and accepting payment for the same, the company cannot defend an action for the statutory penalty incurred by the failure to deliver it with due promptness on the ground that the contents of the telegram related to the sale of futures, and consequently to an illegal transaction.—*Gray vs. Western Union Telegraph Company, Supreme Court of Georgia.*

Damages for Failure to Deliver Goods Sold.

Where merchandise is sold for future delivery and not delivered until after the date contracted for, the measure of damages is the difference between the value at the date of delivery and the date agreed upon, and the buyer will not be permitted to show that he had contracted to sell the merchandise for a certain sum and thereafter sold it for a less sum. The measure of damages is the difference in value and not in individual contracts.—*Ramish vs. Kirschbraun, Supreme Court of California.*

Liability of Carrier.

In the case of *Charlotte, C. & A. Ry. vs. Wooten* the Supreme Court of Georgia decided that though goods saved by a common carrier from the perils of a freshet were damaged by passing through the freshet, yet if some not saved are unaccounted for, and it is not shown that the freshet caused their loss, or what their condition was when they disappeared, a recovery for their value may be had against the carrier without deducting anything for conjectural damage which they may have sustained by reason of the freshet before the loss occurred.

Long and Short Haul Clause of Inter-State Commerce Act.

Where a violation of the long and short haul clause of the Inter-State Commerce Act is sued upon, the fact that the rate sued upon was made jointly by the defendant and another road not a party to the action has no effect upon the liability of the company sued, but to establish the violation the shipper must show that the higher rate for the shorter distance is for like services under substantially similar conditions and circumstances.—*Junod vs. Chicago & Northwestern Railway Company, Circuit Court of the United States, Southern District of Iowa.*

Damages to Property Under a Lease.

In the case of *Machen v. Hooper*, the Court of Appeals of Maryland decided that when a person leases property for a specified use, he impliedly warrants that it shall be fit for the use for which it was leased. Where a lease provided that the lessees should be liable for all damages, other than loss or damage by fire, which should occur to the leased building "by or by reason of any act or thing done or occurring within," or outside of said building by the lessees or their servants, and the lessees also covenanted to surrender the premises in as good condition as when received by them, "ordinary wear and tear excepted," they were not liable for the injuries to the building arising from its imperfect construction, by reason of which it falls to the ground under the ordinary weight of the use for which it was leased.

Liability of Employer for Negligence of Employee.

A grain elevator was operated by machinery moved by horse power in an adjoining "power house." The central wheel was moved by a horizontal lever. Upon the wheel there was a convenient place to sit and ride. The place was attractive to children and they were permitted to frequent it. The employee in charge of the machinery and power house, on the day in question, having notice of the presence of a boy 6 years old, hitched the horse to the lever and started the power while the latter was sitting on the wheel, exposed to danger from uncovered machinery, and then left the premises, with no one in charge. Soon after, in getting off the wheel, the child was caught under the "tumbling-rod" and killed. This was negligence on the part of the employee for which the employer was liable. The acts or omissions of the child's parents in suffering him to be upon the street, in the vicinity of the power house, were not to be negligence proximately contributing to the injury, and would not prevent the recovery of damages.—*Gunderson vs. Northwestern Elevator Company, Supreme Court of Minnesota.*

Railroad—Mortgages—"Appurtenances."

The Supreme Court of the United States held, in the case of *Humphreys vs. McKissock* and the *Wabash, St. Louis & Pacific Railway Company vs. The Same*, reported in the *Railway and Corporation Law Journal*, that the ownership of stock in a corporation confers no ownership of its property; that, therefore, a railway company's mortgage of its entire road, with all its privileges, franchises, real estate, depots, etc., "and other appurtenances thereunto belonging," did not cover stock owned by it in an elevator company whose elevator was located near its terminus and used by it in common with other railway companies for the storage of grain; that such stock could not be deemed to pass under the mortgage as an "appur-

tenance" to the railroad, and that if it were assumed that the railroad company had an interest in the elevator itself, inasmuch as it was situated at some distance from the railroad on land of another company, such interest would not pass as an "appurtenance," as that term in the mortgage covered only such property as was indispensable to the use and enjoyment of the franchises of the company, not that acquired simply because it might prove useful to it and facilitate the discharge of its business.

Telegram—Non-Delivery—Damages.

According to the decision of the Supreme Court of Iowa in the case of *Garrett v. Western Union Telegraph Company*, reported in the *Railway and Corporation Law Journal*, the statement printed on a telegraph blank that the sender agrees that he will not claim damages for errors or delays or for non-delivery of the message, does not exonerate the company from liability for failing to send the message, nor will such statement affect the company's liability for non-delivery where it is clearly proved that the message was not delivered and there is nothing to show any effort to deliver it. In the case before the court it appeared that a dealer in cattle living in Iowa wired his Chicago correspondent, "Send me market, Kansas City, to-morrow and next day," and that he had previously sent and received a great many messages from that office. The court held that it was a question for the jury whether the message charged the company with notice that the sender intended to act upon the result of it in buying or selling cattle at Kansas City. It having been shown by the evidence that the sender of the message had an arrangement with his correspondent to the effect that if there was no change in the market the correspondent would not answer his telegram, and that on receiving no answer to the telegram the sender bought cattle at the last price that had been sent him, but that he could have ascertained the market price by other means, the court held that the question of his right to recover the damages incurred through his purchase of cattle should be submitted to the jury.



Memberships in the New York Produce Exchange are selling at \$900.

Memberships in the Minneapolis Chamber of Commerce are selling at \$400.

B. P. Hutchinson, formerly of Chicago, has purchased a ticket of membership in the New York Produce Exchange.

A small blaze in the Chicago Board of Trade building during trading hours Oct. 17 frightened the occupants. The fire did little damage.

The St. Paul Chamber of Commerce is considering the advisability of changing the day of the weekly meeting from Monday morning to Wednesday morning.

The trustees of the Buffalo Merchants' Exchange are considering an amendment to the by-laws by which an appeal to the arbitration committee will be optional, not compulsory as at present.

The St. Louis Merchants' Exchange recently voted that a site be chosen for the new exchange building and that the real estate committee look about for a suitable location.

The telegraph instruments have been placed on the floor of the Chicago Board of Trade, and it is said that the rates between exchanges have been reduced to the same figures as were in force before April 1, 1890.

A party of Indians occupied the visitors' gallery on the Chicago Board of Trade Nov. 9, and it is reported that they were with difficulty restrained from jumping over into the pit, mistaking the shouts of the traders for the warwhoops of the enemy.

The Minneapolis Chamber of Commerce held its annual meeting Oct. 15. The secretary reported that the sinking fund had increased to \$83, and it is expected that the \$100,000 bonds which mature in 1894 can be paid off. During the year many new members were enrolled. Committees were appointed for the ensuing year as follows: Membership, H. W. Commons, H. A. Smith, Samuel Morse, W. L. Nichols, W. T. Fraser. Commissioners on quotations, D. Morrison, C. M. Loring, W. D. Washburn, G. A. Pillsbury, A. J. Lawyer, Thomas Lowry, G. S. Barnes, T. B. Casey, G. F. Porter, F. H. Peavey, J. B. Bassett, L. R. Brooks and G. W. Van Dusen.

The Russian investigators, A. F. Batalin, a naturalist and member of the Imperial Botanic Garden of St. Petersburg, Russia, and I. F. Kandouroff, a farmer of Stavropolsk province, are said to have made the discovery that under certain conditions rye becomes a perennial plant, and also that with proper culture several crops may be harvested in one year. These conclusions are the result of observations and experiments extending over a period of several years.

OBITUARY

D. Duckwall of D. Duckwall & Son., grain dealers at Louisville, Ky., is dead.

Peter Lennon, dealer in grain, hay and produce at Lennon, Mich., is dead.

William H. Rutter, grain dealer of Baltimore and a member of the Corn and Flour Exchange, is dead.

Charles L. Tucker, an ex-president of the St. Louis Merchants' Exchange and formerly a miller, died at Saco, Me., Oct. 26.

John Hossack, an old-time grain dealer of Ottawa, Ill., died of pneumonia Nov. 8, aged 85 years. He was born in Scotland, came to America when 12 years of age, and settled in Ottawa in 1849, where he did a large grain business. In 1860 he became famous as an advocate of the abolition of slavery, having assisted many negroes on their way to Canada.

George Bain, who was president of the St. Louis Merchants' Exchange in 1878, died at his home in that city Oct. 22, aged 55 years. He was born in Scotland, and located in Chicago in 1855, where he embarked in the grain commission business as the junior member of the firm of Clark & Bain. He remained in Chicago nine years, and in that time was successively a member of the firms of Geo. Sitz & Co., Hobbe, Oliphant & Co., Gilbert, Updike & Co. and Updike & Field. He continued his connection with the latter company upon his removal to St. Louis in 1864, and here he became actively associated with the firm of Updike, Field & Co., which afterward changed to Updike, Bain & Co. At the same time Mr. Bain had an interest in the grain commission business of Kehlor, Updike & Co., New Orleans. Early in the '70s Mr. Bain withdrew from these firms, and opened a grain commission business with his brother Will under the firm name of George Bain & Co., and at the same time entered the milling business. He leaves a wife and five children.

Miscellaneous Notices

DIRECTORY OF GRAIN DEALERS.

Kingsley's Directory is the only complete work containing the name and address of every firm engaged in the following lines of business: Grain, milling, flour and feed, hay and straw, butter and eggs, fruit and produce, malting, brewing, distilling and poultry. New edition, thoroughly revised, 1891. Over 500 pages octavo, substantially bound in cloth. Indispensable to those who wish to reach the lines of business named above.

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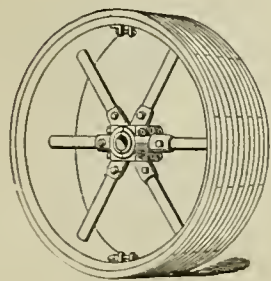
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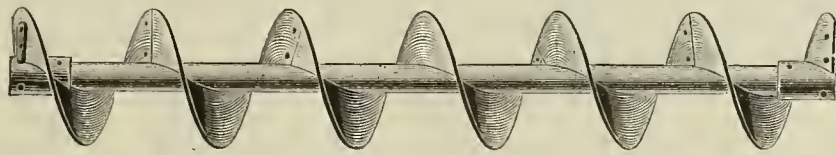
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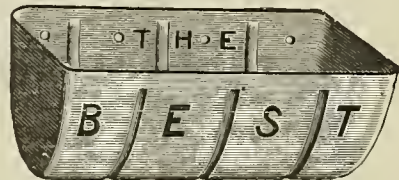
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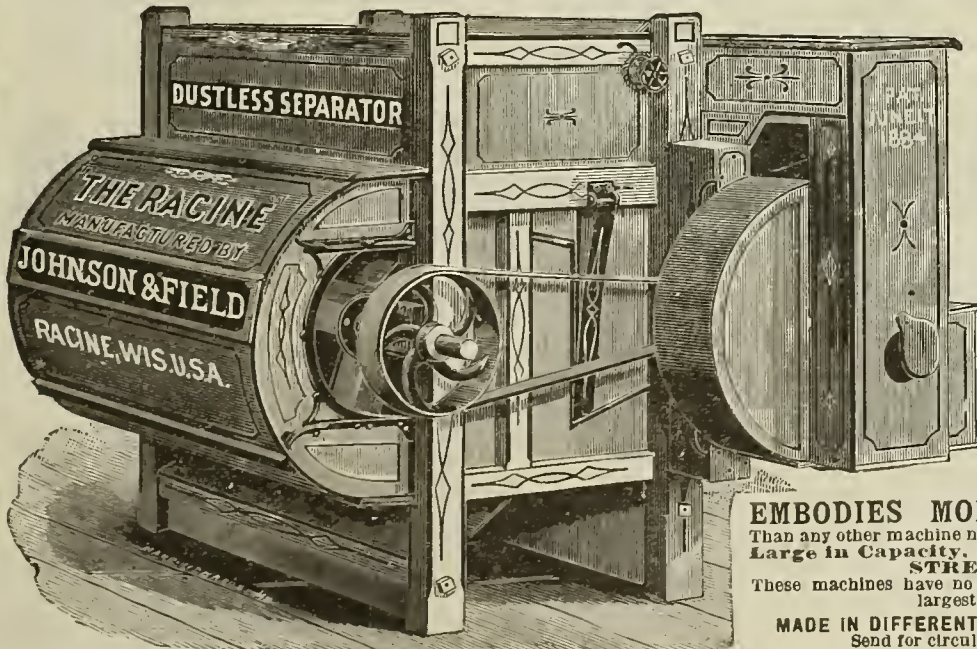
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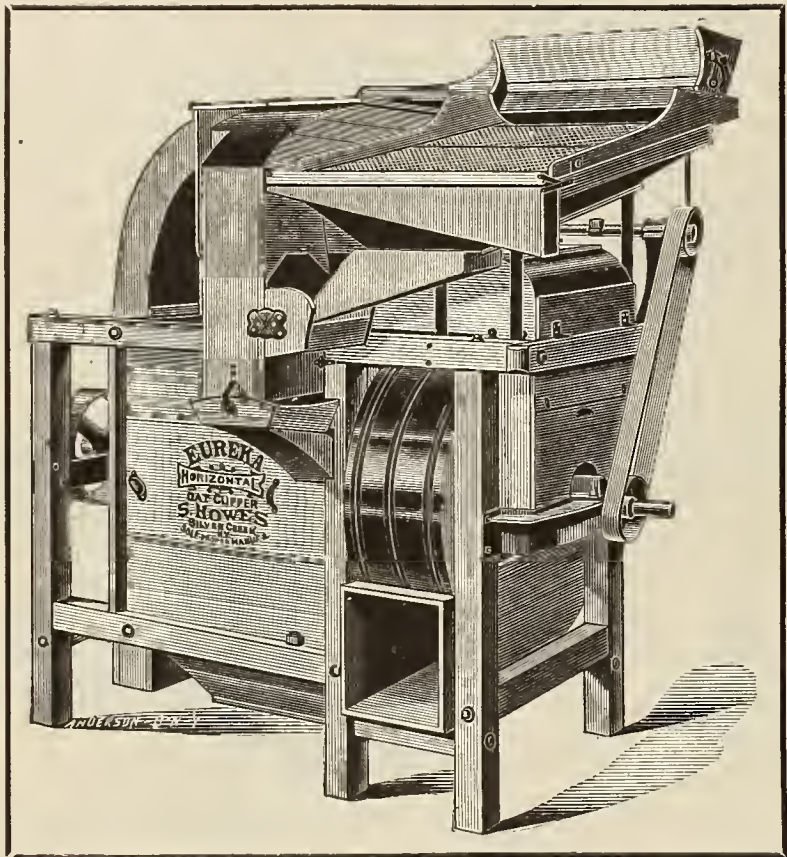
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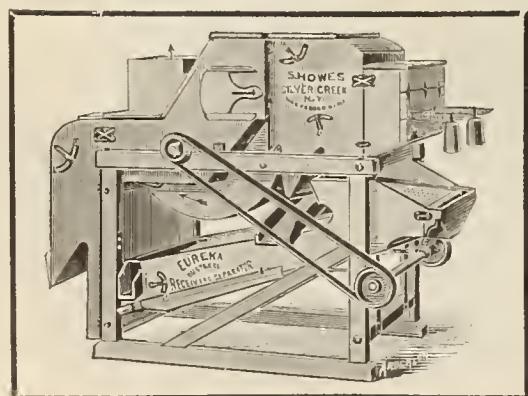
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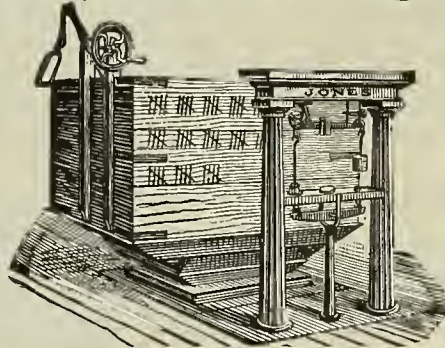
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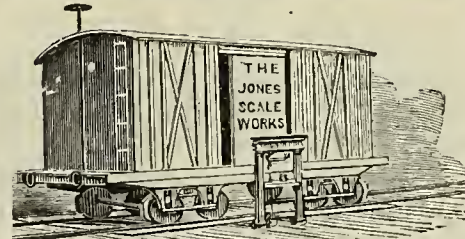
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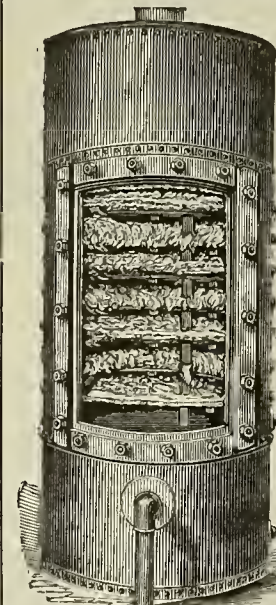
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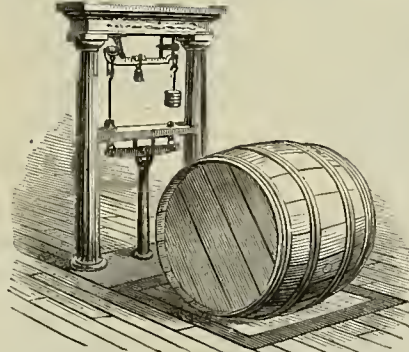
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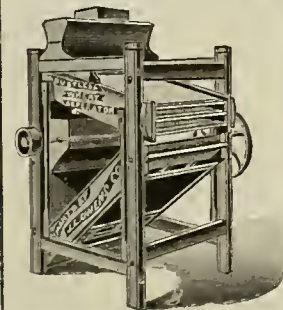
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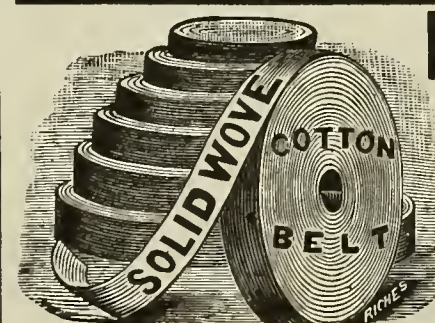


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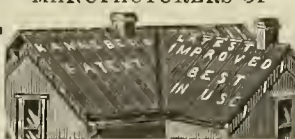
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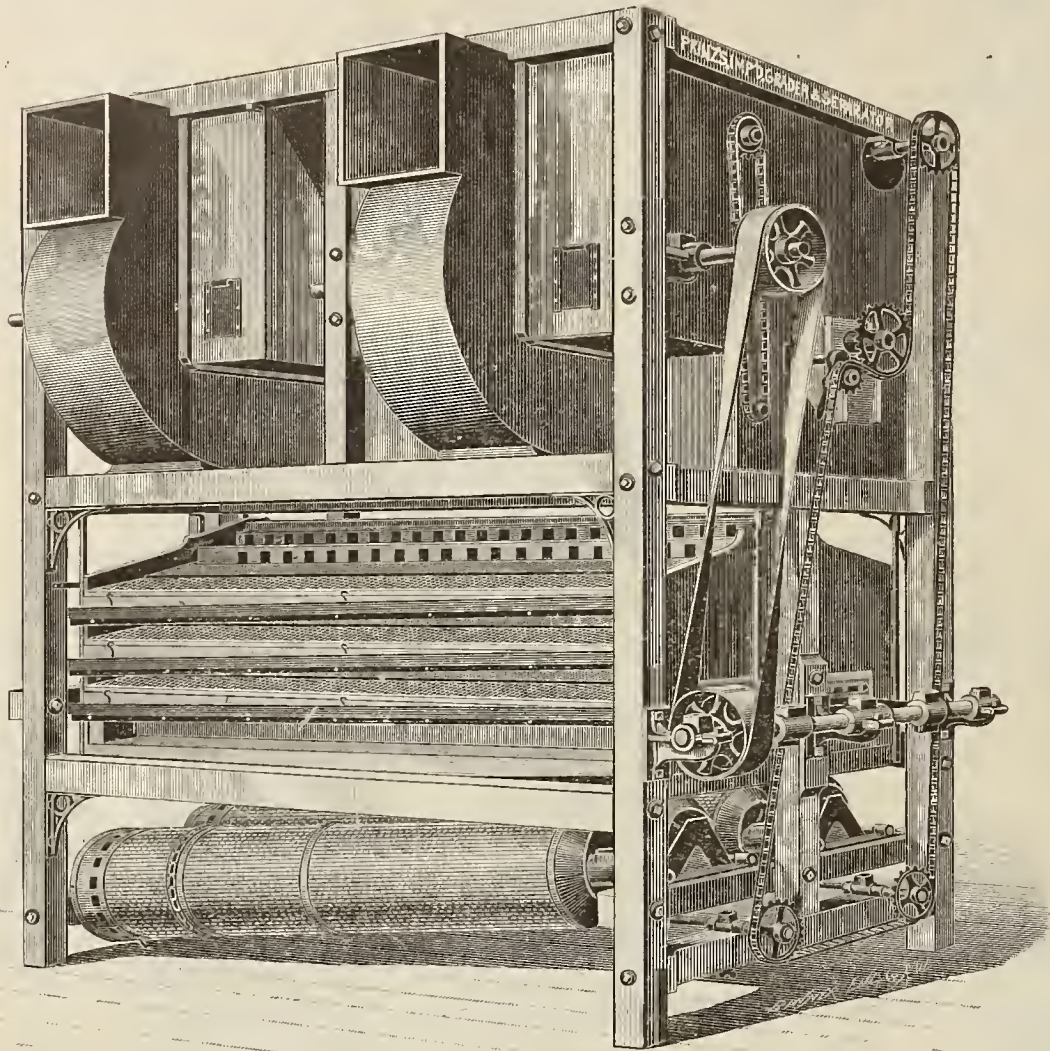
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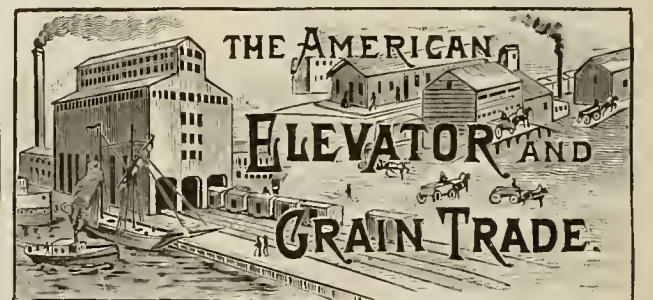
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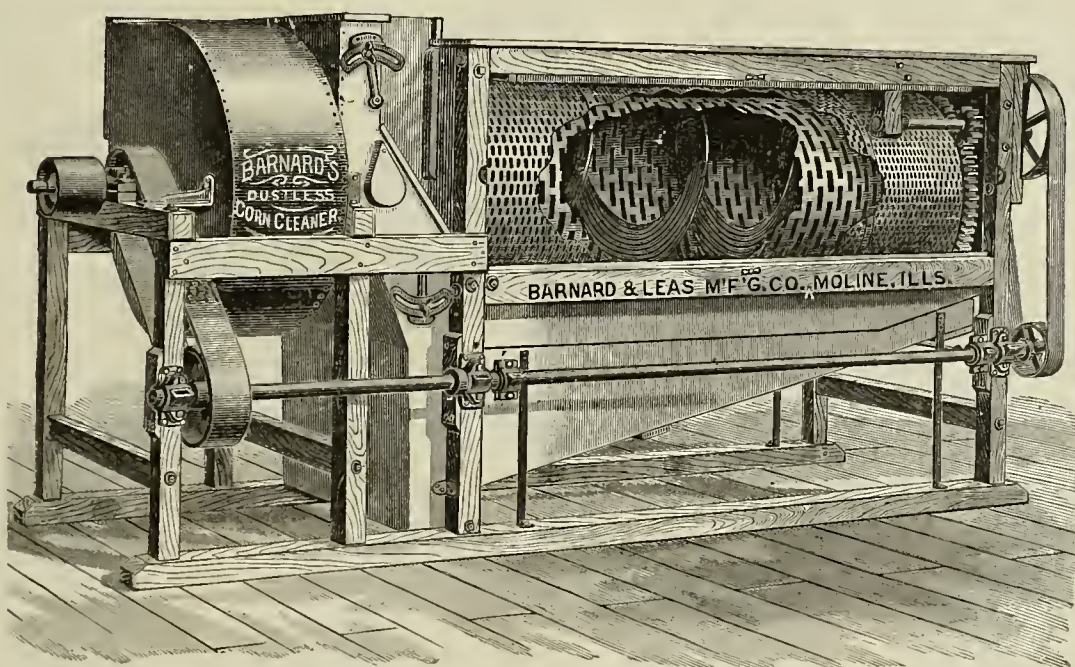
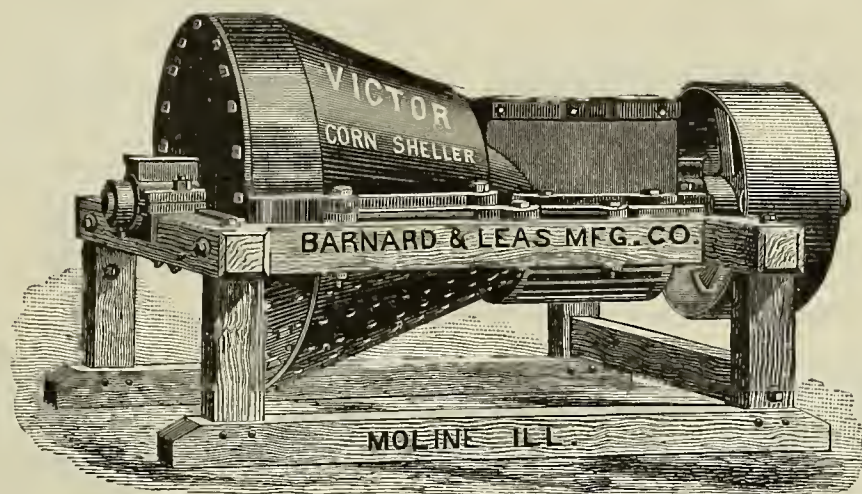
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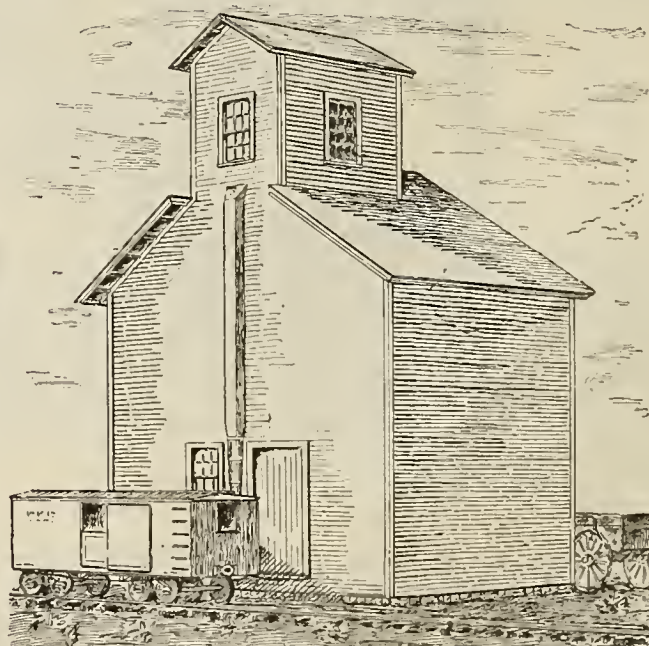
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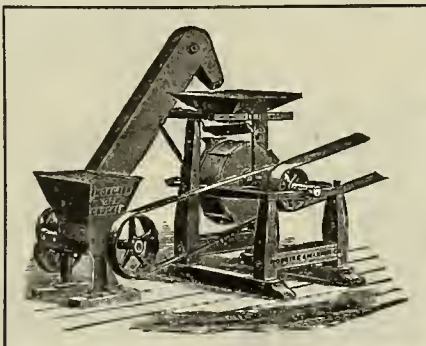
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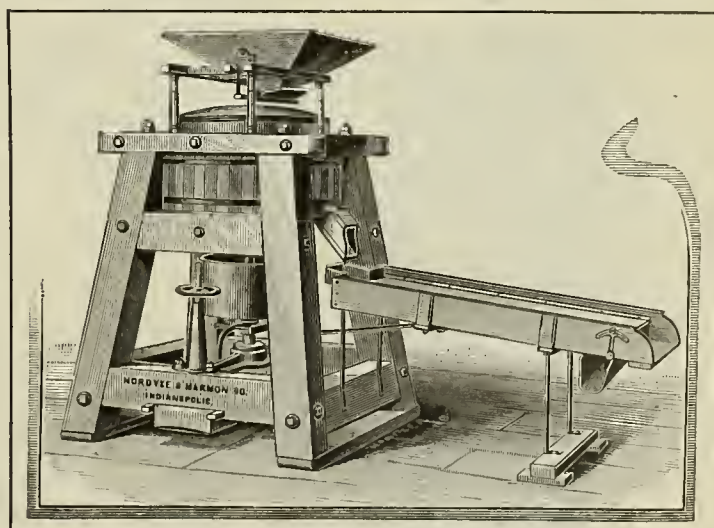
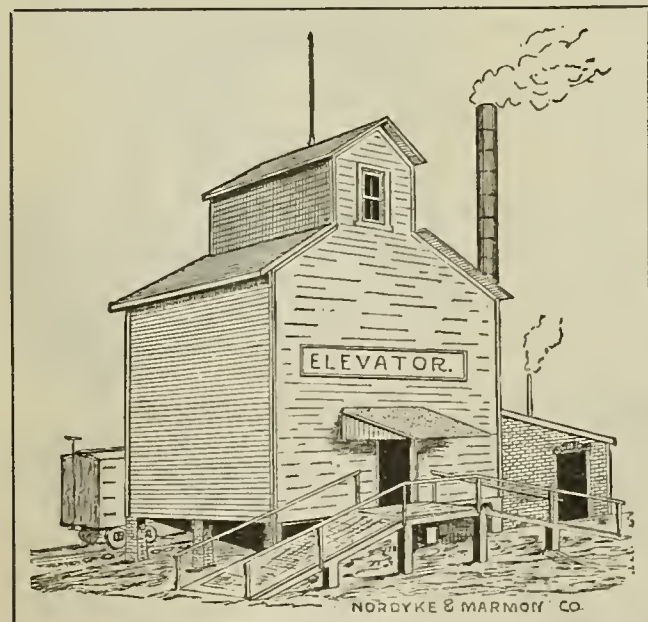
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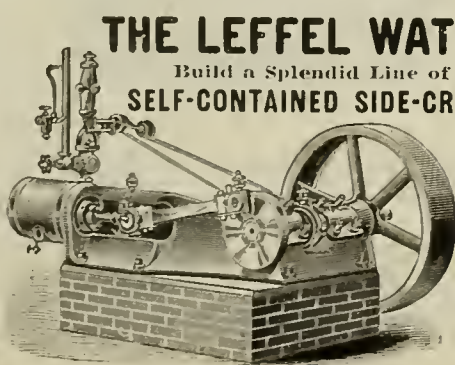
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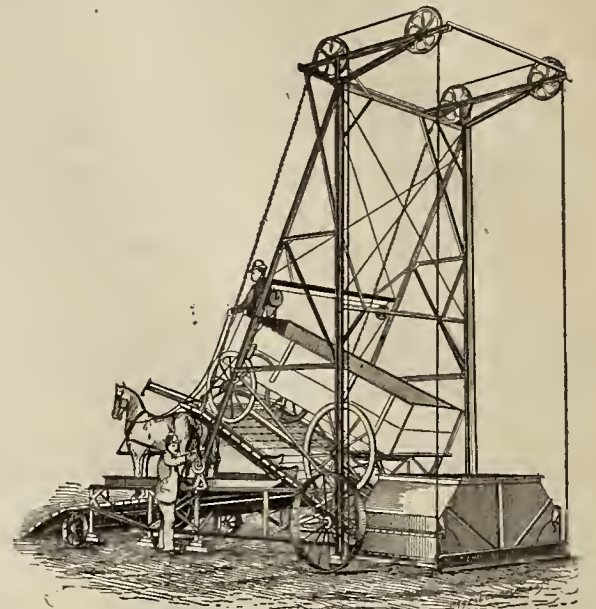
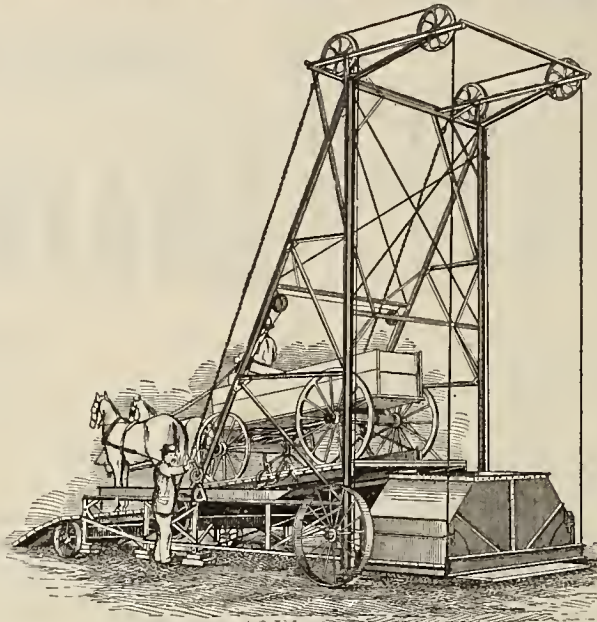
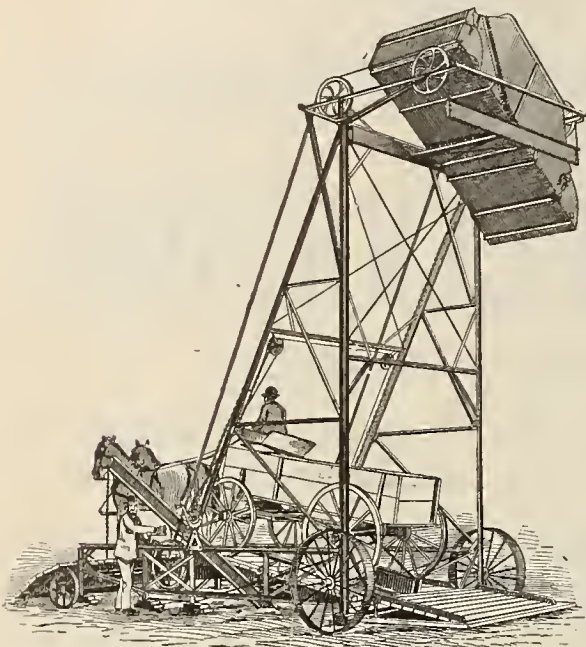
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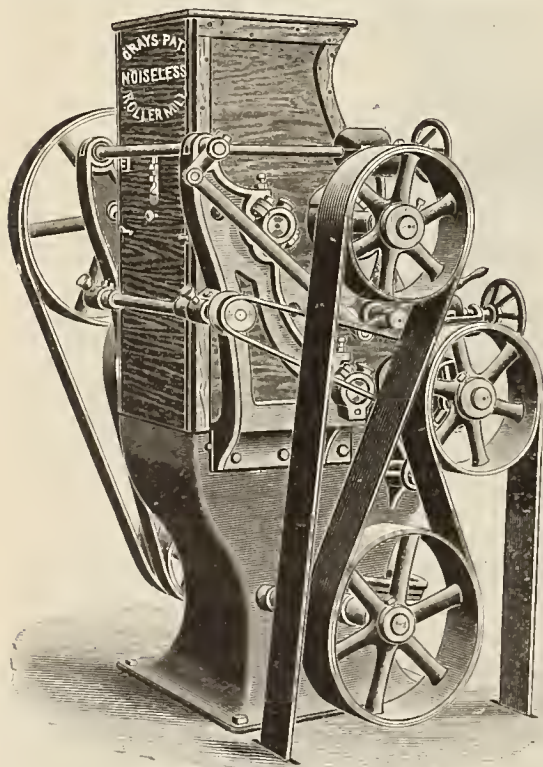
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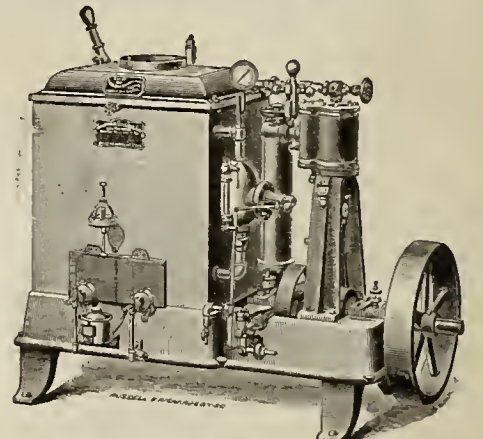
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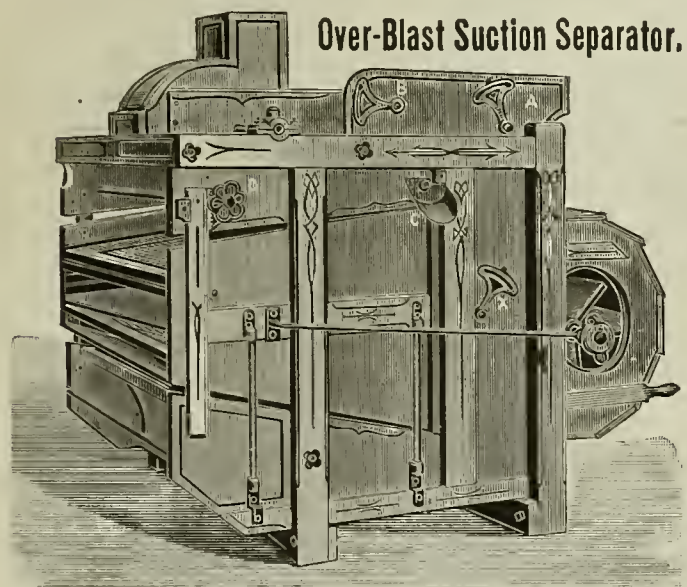
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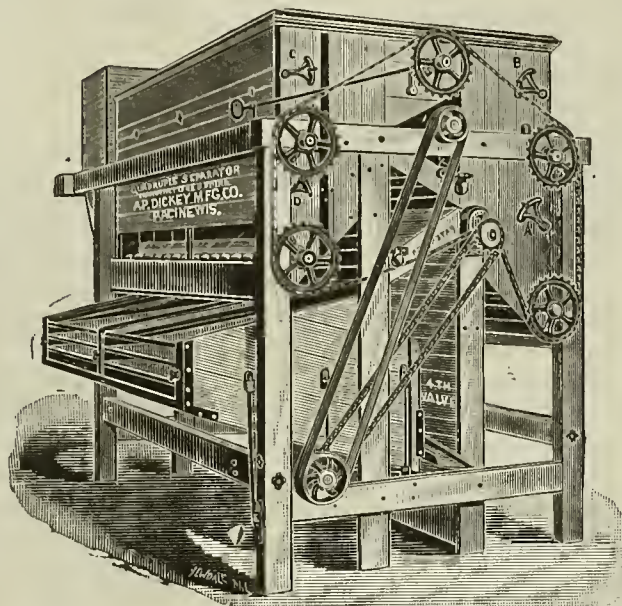
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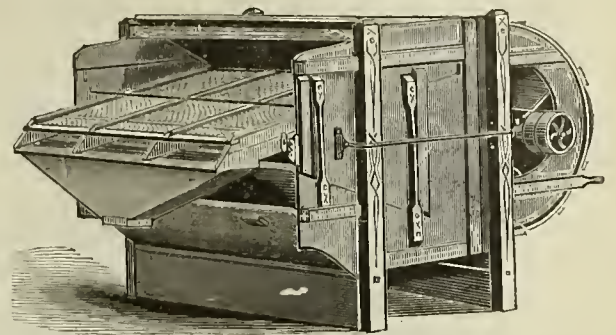
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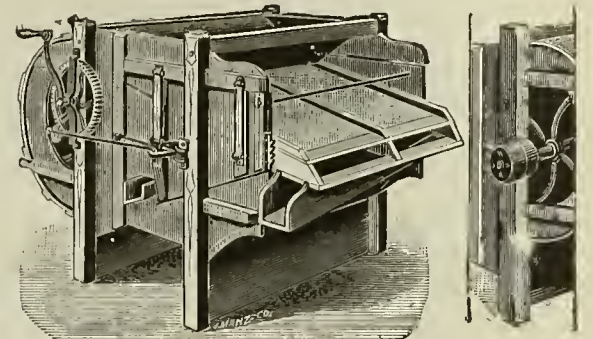
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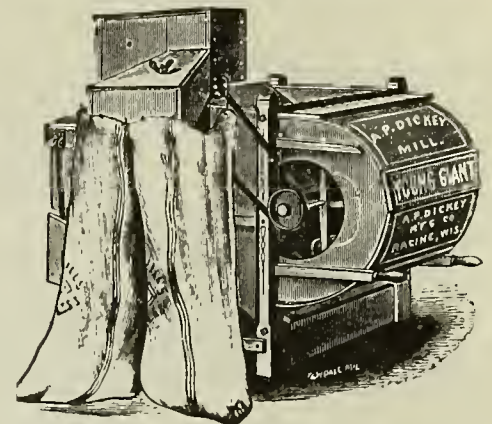
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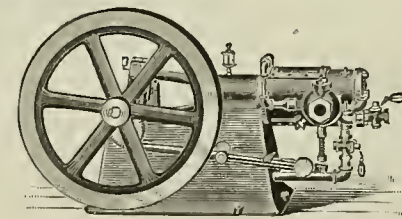
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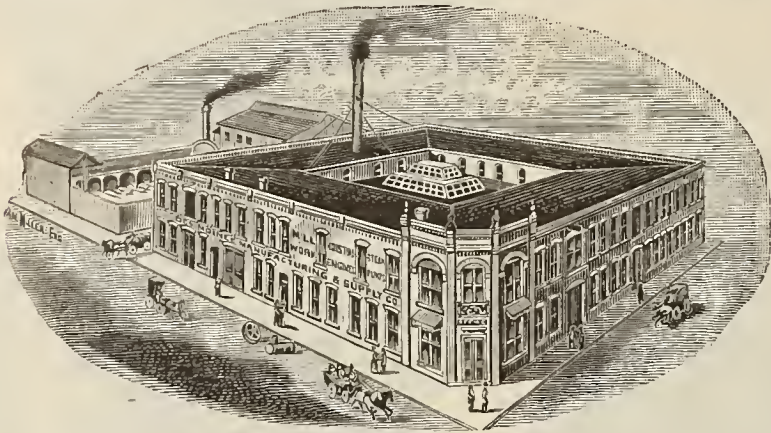
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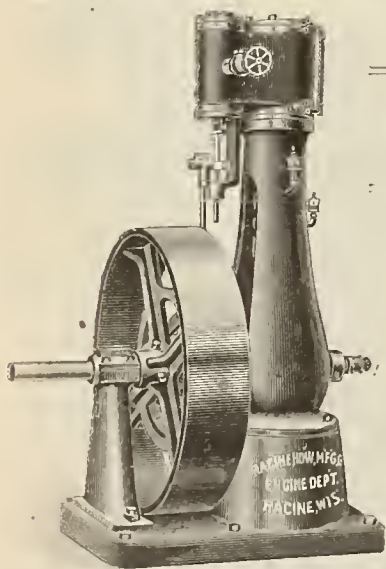


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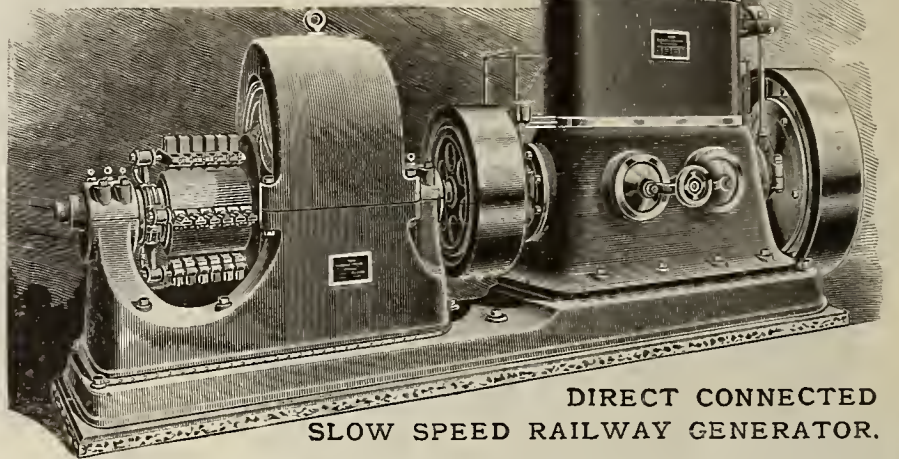
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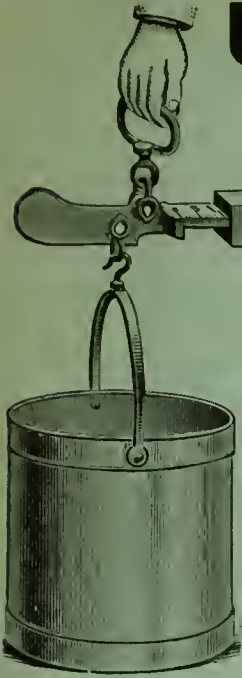
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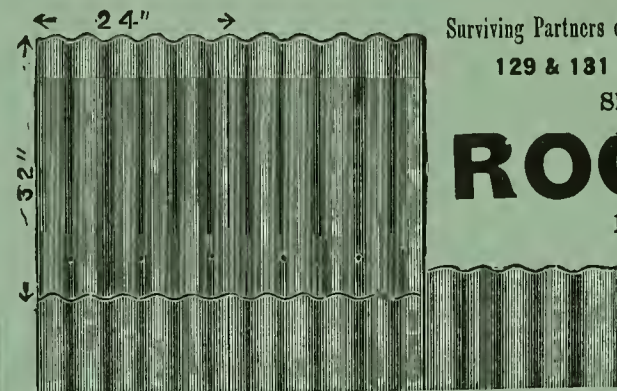
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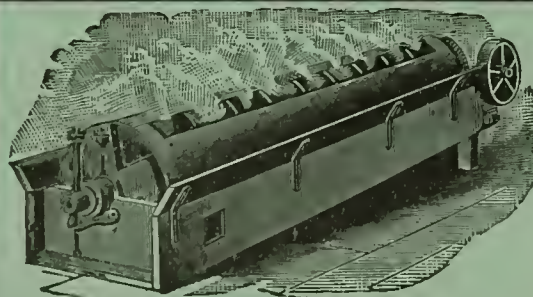
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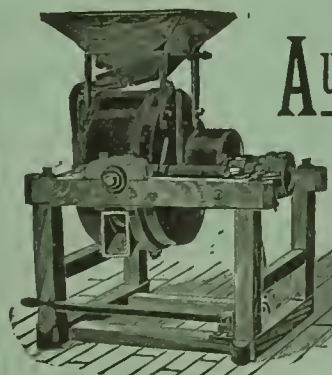


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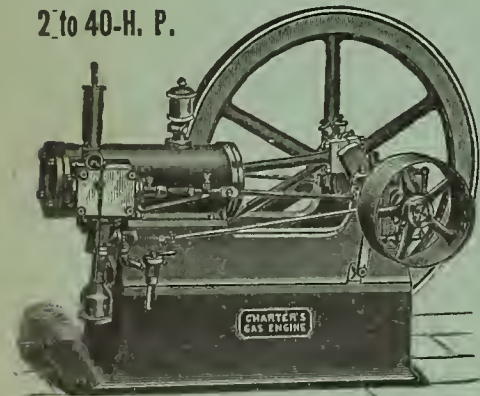
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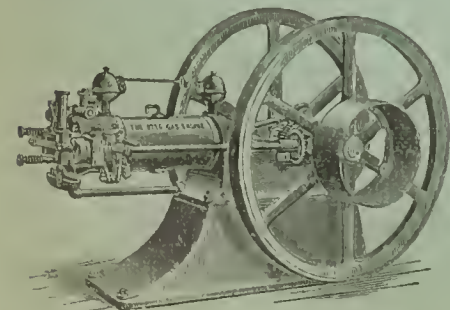
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